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ABSTRACT

FAMILY STUDIES PROGRAM DEVELOPMENT AT THE COLLEGE LEVEL: A DELPHI STUDY

by

Wanda Young

The purposes of this study were (1) to identify objectives and course groupings, for a program in family studies at the college level, (2) to determine appropriate content topics for family studies in formal, non-formal, and informal learning systems, (3) to contribute to the theory of Delphi method by comparing panels that have hierarchical, heterogeneous, and homogeneous sections, within specialist and generalist groups.

A fifteen member advisory committee evaluated the objective and pilot tested the questionnaire completed by 104 persons in six Delphi panels. The response to the three round study was 89.4%, 82.7%, and 89.4%. The interval between rounds was 24 and 26 days. The 123 items in the round one questionnaire were derived from the review of literature. Panelists suggestions were added in round two and information and evaluation items in round three. A four-point Likert-type scale was used as a metric.

Statistics reported to panelists were median and interquartile range. Round three data were submitted to principal factor analysis with varimax rotation, two-way analysis of variance and Newman-Keul one-way analysis of variance. The Uhl formula was used to test convergence to consensus.

The results of the study indicated:

- (1) Delphi method was suitable for the development of a program in family studies at the college level, in the population of this study.
- (2) The program in family studies would provide the graduate an understanding of human development, communication, and integrative processes to help individuals and families improve the management of food, shelter, textiles, and human relationships.
- (3) Informal, formal, and non-formal learning systems were preferred for content topics related to family studies, in that order.
- (4) The belief that home economics has a wider meaning than food preparation and clothing and a knowledge of families most influenced panelists in their decision.
- (5) The belief that home economics and family studies have the same meaning was slightly higher than the belief that sociology and family studies mean the same.
- (6) Convergence to consensus on objectives and formal content topics was complete by round two and on informal content topics by round three. There was incomplete convergence on the items: chemistry; family goals and objectives, growth and awareness, death and dying, censorship, and hobbies.
- (7) There were sufficient differences in the panels to warrant continued research on specialist and generalist groups with hierarchical, heterogeneous, and homogeneous sections.

FAMILY STUDIES PROGRAM DEVELOPMENT
AT THE COLLEGE LEVEL:

A DELPHI STUDY

By

Wanda Ena Young

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CHAPTER 1

INTRODUCTION

This study was concerned with the future of a College of Home Economics. To adapt to change in the province of Saskatchewan, a program in family studies was recommended by a committee that reviewed the role of the College of Home Economics.

To help man have a better knowledge of things to come in a period of rapid change, scientists developed a field of study entitled futures research or futuribles.¹ One method of futures research, in use to determine the possibility and probability of needs achievement, was the Delphi method of forecasting. Early leadership in this methodology was credited to Olaf Helmer, who used specialist and generalist panels. In 1975, Helmer documented research needs for futures research. One of the questions related to the Delphi method was of concern in this study.

"How does a hierarchical panel of experts
compare with a homogeneous panel?"²

Social organizations were classified as homogeneous, hierarchical, and heterogeneous by Maruyama.³ Maruyama explained that homogenistic

¹Bertrand de Jouvenal, Art of Conjecture, New York: Basic Books, 1967, p. VIII.

²Olaf Helmer, "An Agenda for Futures Research", Futures, 7 (February 1975), p.6.

³Magarah Maruyama, "Cultural, Social and Psychological Considerations in the Planning of Public Works", Technological Forecasting and Social Change, 5 (1973), p. 140.

thinking had one right way.¹ Such thinking may occur in the mother in the home, the informal learning situation of this study. A hierarchy was characterised by a leadership structure, theory centered with classificational thinking, stated Maruyama.² This described the formal learning system used in this study. When diversification, networks, and complexity were found the situation was heterogenistic, according to Maruyama,³ a situation which will increase in the future.⁴ This situation was applicable to the non-formal learning system used in this study. Maruyama illustrated homogeneity, hierarchy, and heterogeneity in an analogy using the development of society in North America. The pioneer established a farm on the plains (homogeneous). As more farms were established small communities were built which required rules and government (hierarchy). As population increased, roles were differentiated and the community grew to a large city or megalopolis (heterogeneous).⁵

This analogy related to Daniel Bell's classification of society as pre-industrial, featuring extractive industries in a lifestyle

¹Idem, "Paradigms and Communication", Technological Forecasting and Social Change, 6 (1974), p. 19.

²Ibid., p. 17.

³Ibid., p. 21.

⁴Ibid., p. 12.

⁵Idem, "The Second Cybernetics: Deviation Amplifying Mutual Cause Processes", American Scientist, 51 (1963), p. 166.

shaped in a game with nature; industrial society, which produced goods through the use of energy and machines; and post-industrial society, which is a service society provided information by the professional.¹

This study was concerned with an addition to Delphi methodology that may in future assist the people of Saskatchewan adjust from the agrarian family life style to family life in post-industrial society. Therefore, a heterogeneous panel of experts was included in this study.

Report of the Minister's Advisory Committee on Family Life Education, 1974 recorded finding a concern among citizens of Saskatchewan for "family life education" and "life education". Recommendations were listed regarding teacher training programs in family life education.

One specific recommendation

"for persons wishing to major in family life education, that beyond the (introductory) course offered by the College and Faculty of Education advanced courses be offered through the Colleges of Home Economics, Physical Education, Education and Arts and Science in Saskatoon and the Faculty of Education, Faculty of Arts and Science and the School of Social Work in Regina."²

Another publication, A Report on the Role of the College of Home Economics, 1975, included a recommendation for a "new specialized program under some such title as Family Studies".³

¹Daniel Bell, "The Coming of the Post-Industrial Society" Educational Forum, XL, 4 (May 1976), p. 576.

²Saskatchewan Department of Education, Report of Minister's Advisory Committee on Family Life Education, 1974, p. 29.

³University of Saskatchewan, A Report on the Role of the College of Home Economics at the University of Saskatchewan, 1975, p. 33.

These reports showed the need for development of a program in family studies at the University of Saskatchewan.

Two questions were derived:

What are objectives for a program in family studies in Saskatchewan?

What are the course groupings and disciplines for a program in family studies?

These were questions for which opinions obtained through consultation with experts, a feature of a Delphi study were useful.

Recommendations for content components were listed.¹ Programs in family studies in Saskatchewan might be provided in the formal learning system, from kindergarten to grade twelve, in community colleges, and universities. Graduates from a university program in family studies might work as consultants and program coordinators in diverse non-formal learning systems. Parents provided family studies in the home, an informal learning situation. A final question was formulated:

What content is appropriate for family studies in formal, non-formal, and informal learning systems in Saskatchewan?

¹Saskatchewan Department of Education, Report on the Minister's Advisory Committee on Family Life Education, Chapter V, pp. 24-29.

In summary, the purposes of this study were:

1. To assist in the implementation of a program in family studies at the University of Saskatchewan.
 - 1.1 by identifying objectives for a program in family studies.
 - 1.2 by identifying course groupings and disciplines for a program in family studies.
 - 1.3 by determining appropriate content for formal, non-formal, and informal learning situations in Saskatchewan.
2. To contribute to the theory of the Delphi method by comparing panels of experts that are hierarchical, homogeneous, and heterogeneous; specialist and generalist.

SELECTED GROUPS

Factors influencing the selection of Delphi panels and the advisory committee used in this study included the traditional selection of experts in Delphi studies, the relationship of the experts to the learning situation, and the needs in Saskatchewan.

Early Delphi studies, conducted by Olaf Helmer, used specialists to provide substantive information and generalists to clarify needs by stating preferences.¹ The substantive background for this study was family studies in home economics. It followed that specialists were defined as university graduates in home economics or family studies. Generalists included university graduates who work in or with families, but have professional training other than home economics.

¹Olaf Helmer, Social Technology, New York: Basic Books 1966, p. 11.

Within the specialist and generalist categories, some panelists worked in the hierarchy of the formal learning system. Specialist experts from outside Saskatchewan were invited to provide input about family studies programs in effect. Deans, directors, department heads, faculty members, and extension workers were invited to participate. From Saskatchewan, there were College of Home Economics faculty, extension workers, and home economics high school teachers, including those who taught the family life program for high school. The corresponding hierarchical sub-group within the generalist group was drawn from superintendents, principals, and teachers from both public and separate high schools and elementary schools. University faculty were in the advisory committee which examined the framework of objectives developed by the panelists.

Those who serve families as consultants, who educate outside the formal institutions formed the heterogeneous group. The specialists included consumer consultants, free lance home economists, dietitians, and those in diverse occupations and businesses. The generalists included those who counsel families in finance, religion, social work, clinics, legal matters, recreation, and those who work with families through service and health care associations. This was the service group described by Daniel Bell, which forms the heterogeneous network of Maruyama, referred to earlier.

The homogeneous groups in the study fulfilled the following recommendation:

"steps be taken to involve members of local communities, both rural and urban, in curriculum planning, especially in the area of family life education".¹

University of Saskatchewan married female alumnae were invited to participate. The specialists were from the College of Home Economics alumnae. Graduates from other colleges were in the generalist group.

Persons invited to participate in the advisory committee were from the University of Saskatchewan, the commissions, and committees in Saskatchewan that prepared reports reviewed for this study. The purposes of the advisory committee were (1) to assist in the development of the study, and (2) to evaluate the framework of objectives.

DEFINITION OF TERMS

The operational terms were listed and clarified for their usage in this study. Terms defined in feedback to the panelists are in round two and round three Interaction in the Appendix.

Calendar listed information, such as: programs and course descriptions for a college or university. The purpose was similar to that for university catalogue used in the United States.

Consensus was the degree of within group agreement.² Over fifty percent was considered achievement of consensus. It was measured

¹Saskatchewan Department of Education, Report of the Minister's Advisory Committee on Family Life Education, p. 30.

²Peter George Gazzola, "Effect of Delphi Technique on Group Consensus", Dissertation Abstracts, 31A-5072 September - October, 1971.

by the semi-interquartile range. A range of 0.45 or less indicated more than 50% of the panelists were less than one interval apart.

Content topics were the subjects or concepts dealt with in an area of study.

Convergence was the movement of group thinking toward consensus.

Course Groupings were a series of like units of instruction.

Delphi Method was a set of procedures to elicit and refine the opinion of a group of people.¹

Delphi Panel was a group of persons selected to provide opinion on a topic of interest.

Experts were persons invited to form a Delphi panel. They were classified as specialist and generalist groups, in this study.

Specialist was a person who provided substantive information.

Generalist was a person who lacked specialized information about the topic of concern, but clarified concepts and needs and evaluated for preferences.²

Family was the unit recognized as family for statistical purposes: husband and wife, with or without children, or a parent and child or children living together in the same dwelling; the family of orientation, of procreation or choice; a unit where feelings of kinship and responsibility take priority over other relationships.³

¹R. Weatherman and K. Swenson "Delphi Technique" in Futurism in Education, eds. Stephen Hencley and James R. Yates, Berkeley, California: McCutchan Publishing Corporation, 1974, p. 97.

²Olaf Helmer, Social Technology, p. 11.

³Saskatchewan Department of Health, Report of Family Planning Committee to the Committee of Ministers on Family Planning, 1975, p. 32.

Learning system was the development of knowledge, skills, mind, and character in an arrangement to form a unified whole. In this study three systems were of concern.

Formal system was a system offering an established curricula in a designated physical space, such as a school building.

Informal system was learning that occurred within the boundaries of the home and family environment.

Non-formal system was learning that does not occur, in the institutions of the formal system, nor in the home.¹

Objectives were accurate descriptions of the outcomes of education,² the goals to be met by the program.

Opinion was the judgement of a panelist on a matter in which advice was sought.

Panel Structure was the composition of the group of panelists in the three Delphi sections.

Hierarchical section was a group of panelists arranged in order of rank.

¹The definitions for formal, informal, and non-formal learning systems were adapted from Norma Bobbitt and Beatrice Paolucci, "Home as a Learning Center", Michigan State University, 1975, pp. 171-172.

²R. Davis, L. Alexander, and S. Yelon, "Learning Systems Design", New York: McGraw Hill Book Company, 1974.

Heterogeneous section was a group of panelists composed of unlike, miscellaneous parts.

Homogeneous section was a group of panelists composed of parts with similar functions.

Panelist was the term used throughout the study to describe respondents to the Delphi questionnaires. To simplify discussion of data the groups and sections were referred to by number until the final summary, as follows:

Section 1 was specialist hierarchical.
Section 2 was specialist heterogeneous.
Section 3 was specialist homogeneous.
Section 4 was generalist hierarchical.
Section 5 was generalist heterogeneous.
Section 6 was generalist homogeneous.

Program was the development of a list of course groupings and content topics which have relevance to student attainment of academic objectives or goals.

RESEARCH QUESTIONS

The purposes of this study related to the substantive content of a program in family studies and to Delphi methodology. Specific research questions used were:

Question 1: is the Delphi method suitable to determine objectives, for a program in family studies, in a college of home economics?

Question 1.1: Is the Delphi method suitable to determine course groupings, for a program in family studies, in a college of home economics?

Question 2: Are there significant differences among the means of the ratings by specialist and generalist groups, on objectives for a program in family studies, when the scores are classified on the basis of hierarchical, heterogeneous, and homogeneous sections?

Question 2.1: Are there significant differences among the means of the ratings by specialist and generalist groups, on course groupings for a program in family studies, when the scores are classified on the basis of hierarchical, heterogeneous, and homogeneous sections?

Question 2.2: Are there significant differences among the means of the ratings by specialist and generalist groups, on content topics for a program in family studies, when the scores are classified on the basis of hierarchical, heterogeneous, and homogeneous sections?

Question 3: What degree of consensus, about objectives for a program in family studies, is achieved by specialist and generalist groups, in hierarchical, heterogeneous, and homogeneous sections, across three rounds?

Question 3.1: What degree of consensus, about course groupings in a program in family studies, is achieved by specialist and generalist groups, in hierarchical, heterogeneous, and homogeneous sections, across three rounds?

Question 3.2: What degree of consensus, about content topics for a program in family studies, is achieved by specialist and generalist groups, in hierarchical, heterogeneous, and homogeneous sections, across three rounds?

Question 4: What is the rating for importance of content topics in a program of family studies, in a formal, non-formal, and informal learning systems?

LIMITATIONS OF THE STUDY

Limitations of the study were related to the population of the study and to the methodology and procedures.

The population of the study was limited, geographically, to Saskatchewan. If the population was considered as the profession of home economics, with interests in family studies, the generalization was to Canada. Academically, the population was limited to persons with a high school certificate and a baccalaureate degree or additional training.

The Delphi methodology was in a developing stage. Each iteration was built on the input of response from the preceeding round. This limited pre-testing the instrument. The method used opinion, which permitted various interpretations.

A further limitation resulted from the number of missing cases in the study. Subjects found the questionnaire long. Part three was complex and had as many as seven missing cases for some items. Some subjects did not mark the section of items added in round two and three from suggestions from participants. The Xerox 1230 machine was sensitive only to heavy pencil marks. The sheets were remarked and rerun before use in statistical calculations.

CHAPTER 2

REVIEW OF LITERATURE

The review of literature for this study dealt with that aspect of futures research entitled the Delphi method, a methodology in which concepts from a number of experts were aggregated. In addition, an analysis of the reports about family studies published in Saskatchewan from 1973 to 1975 was included. Finally, there was a section about the future and programs in family studies.

THE DELPHI METHOD

Weatherman and Swenson interpreted the Delphi method of forecasting as a set of procedures to elicit and refine the opinion of a group of people.¹ The present review considered: (1) the history, purposes, and philosophy of the Delphi method, (2) the process of the Delphi method, including modifications, such as: the selection of the panel of experts, the format of the response, the number of rounds, and the interval between rounds, (3) advantages of the Delphi method, (4) disadvantages of the Delphi method, and (5) research components.

The History, Purposes, and Philosophy of the Delphi Method

The Delphi method of forecasting developed from operations research of World War II. Olaf Helmer, a major writer and researcher

¹Weatherman and Swenson, "Delphi Technique", p. 97.

in the Delphi methodology, used the opinions of international experts to predict changes needed for the survival of man, permitting the experts to revise their predictions in three iterations.¹

Baier and Rescher analyzed values in today's society.² In 1973, the American Home Economics Association involved members in a Delphi study of "The Future of Home Economics",³ which provided discussion material for the Eleventh Lake Placid Conference. Educators find Delphi studies useful to determine educational goals and strategies to implement the goals, for example, the Skyline Wide Educational Planning Project in Dallas.⁴ The Delphi technique was used as a pedagogical tool by Waldron, Weaver, and Young.⁵ O'Connell submitted a self-explanatory manual to a Delphi panel for evaluation.⁶

¹Olaf Helmer, Analysis of the Future; The Delphi Method, Santa Monica, California: Rand Corporation, March 1967, pp. 7-36.

²Kurt Baier and Nicholas Rescher, Values and the Future, New York: Free Press, 1969.

³Jeanette Lee, "The Future of Home Economics: A Delphi Study", Journal of Home Economics, 65 (October 1973), pp.23-27.

⁴Skyline Wide Educational Plan (SWEP) Planning Project, (Bethesda, Md.: ERIC Document Reproduction Service, ED 109 759; ED 109 760; ED 109 761, (1974)).

⁵James Shear Waldron, "An Investigation into Relationships Among Conceptual Level, Time Delay of Information Feedback and Performance in the Delphi Process", (Dissertation Abstracts 31A: 5862, May 1971); Timothy Weaver, "The Delphi Forecasting Method (Phi Delta Kappan LII, January 1971: pp. 267-271); Wanda Young, "The Role of Home Economics Professional Associations in Family Planning: A Delphi Study" (1974, typewritten).

⁶John Howard O'Connell, "Delphi Assistance to Administration: Development and Testing of an Aid to Educational Decision-making", Dissertation Abstracts 36A: 649, August 1975.

Administrators analyzed cost-benefits in education by the Delphi method, using such tools as those from the National Center for Higher Education Management Systems and Program Planning and Budgeting Systems.¹ To Helmer, the Delphi purposes were philosophical, in that Delphi increases man's understanding of issues and technology; pragmatic, in that future needs can be determined; and methodological because Delphi is a new way to make decisions and develop strategies.²

Linstone and Turoff; Mitroff and Blankenship; Mitroff and Turoff analyzed the Delphi process using philosophical theories as criteria. The writer summarized these articles, noting that the Leibnizian theories contribute to Delphi studies that were formal, mathematical, and logical. If the Delphi coordinator gathered data based on experiences and the consensus of experts, the study was Lockean in nature. If a multi-model was built from abstract, formal theory and data, integrated from many disciplines, the study was Kantian. The thinking of Hegel contributed to a Delphi study that was dialectical, featuring debate and conflict. When the designer was part of the system and truth was pragmatic, related to the goals of the study, the scientific-ethical

¹John Michael Rosich, "Assignment of Group Value Judgements of Educational Outputs Using Delphi Procedures", (Dissertation Abstracts 35A: 7691, 11-12, 1975); Claude Richard Snell, "Community Based Goals of Education by Use of Delphi Technique" (Dissertation Abstracts 35A: 2612, November 1974).

²Olaf Helmer, "New Developments in Early Forecasting of Public Problems: A New Intellectual Climate" (Santa Monica: Rand Corporation, 1967) P-3576, p. 1.

integrative ideas of Singer and Churchman have been used.¹

These writers considered Delphi to be a method for structuring a group communication process to the effective solution of a complex problem.² Next the communication process of Delphi was considered.

The Process of the Delphi Method

The intricacies of the Delphi method were described by Helmer.³

The writer summarized the process to include:

- (1) Selecting a panel of experts.
- (2) Independent questioning of the experts.
- (3) Feeding information about the responses back to the respondents.
- (4) Inviting the responding experts to revise predictions or to give reasons for not so doing.
- (5) Repeating to a total of four rounds.

¹Harold Linstone and Murray Turoff (eds.), The Delphi Method: Techniques and Applications, (Reading, Mass.: Addison Wesley Publishing Company 1975, pp. 20-37); Ian Mitroff and Vaughan Blankenship, "On the Methodology of the Holistic Experiment: An Approach to Conceptualization of Large Scale Social Experiments", (Technological Forecasting and Social Change, 4, 1973, p. 346); Ian Mitroff and Murray Turoff, "Technological Forecasting and Assessment: Science and/or Methodology?", (Technological Forecasting and Social Change, 5, 1973, pp. 117-128).

²Linston and Turoff, The Delphi Method, p. 3.

³Helmer, Social Technology, pp. 9-107.

- (6) Analyzing each round using the median and interquartile range.

Recent studies have modified the Delphi methodology summarized above. The subject has been reviewed by Weatherman and Swenson, and Linstone and Murray.¹ The present writer reviewed ninety-one doctoral dissertation abstracts listed in Dissertation Abstracts International to April 1976, inclusive. Modifications, of the process to be considered next, were classified as:

- (1) Selection of the panel of experts.
- (2) Format of the initial round.
- (3) Format of the response.
- (4) Number of rounds.
- (5) Interval between rounds.

Selection of the Panel of Experts

Helmer and Rescher listed criteria for the use of experts in prediction as: level of knowledge of the person about the topic; and degree of reliability, determined by the relative frequency of accurate predictions already made by the person.² Helmer identified two kinds of experts: the specialist and the generalist. The specialist provided information which will be freer from misinterpretation if a model is provided. The generalist was able to formulate problems; to structure

¹Weatherman and Swenson, "Delphi Technique"; Linstone and Turoff, The Delphi Method.

²Olaf Helmer and Nicholas Rescher, "On the Epistemology of the Exact Sciences", Management Science 6 (October 1959), p. 43.

models, and to give preference evaluation.¹

Lillyquist used sex dyads as a variable, and found the female sample achieved consensus about decisions in the face to face situation of discussion; the male sample performed better in the Delphi method.² Burks compared arrival at consensus by professionals, and non-professionals, finding non-professionals achieved majority consensus on the first round, professionals on the second round.³

Crowley selected a panel of student medical technologists and found a lack of understanding of the median and interquartile range

¹Helmer, Social Technology, p. 11.

²Michael Jerome Lillyquist, "Performance of Span and Delphi Methods in Human Dyads", Dissertation Abstracts 36A: 1510, September 1975.

³Jayne Burress Burks, "A Study of the Application of Delphi Technique to the Future of Social Institution", (Ph. D. Dissertation, St. Louis University) 1974.

information feedback.¹ Holt recommended including potential users in planning. Davis supported this in his experiment that included citizens to determine land use.² Medgrave and Ducanis found personality characteristics of panel members affected the tendency to change.³ Welty found experts relevant in educational forecasting, which was a cost sensitive, value laden topic affecting the future of participants.⁴ Helmer discussed research needs related to the Delphi method. If a multidisciplinary issue was considered, should the panel be homogeneous or hierarchical? He questioned the panel size, speculating that three persons may be preferred to a dozen.⁵ Weatherman and Swenson reported most panels have under fifty members.⁶

¹Judith Ann Crowley, "A Curriculum in Medical Technology Based on the Perception of Practitioners and Students: A Modification of Delphi Technique", Dissertation Abstracts 35A: 2713, September, 1975.

²James Holt, "Involving the Users in School Planning" (School Review 82, August 1974); Joseph Miro Davis, "Land Use Forecasting: A Delphi Approach", Dissertation Abstracts 36A: 2972, November 1975.

³Norman Medgrave and Alex Ducanis, Educational Planning 3 (Winter 1973).

⁴G. Welty, "Some Problems in Selecting Delphi Experts for Educational Planning and Forecasting Exercises", California Journal of Education Research, 24, (1973): p. 133.

⁵Helmer, "An Agenda for Futures Research", p. 6.

⁶Weatherman and Swenson, "Delphi Technique", p. 103.

In summary, the characteristics of the panel of experts should be matched to the nature and purposes of the Delphi study.

Format of the Initial Round

The Helmer study utilized questions for the initial round.¹ Weatherman and Swenson observed that the initial round was usually a needs assessment about an issue of concern. W. A. Jones supported this observation.² Cyphert and Gant and Uhl, recorded the use of open-ended questions.³ Propositions, statements, and lists derived from a review of literature were used by Curran, and Raimon.⁴ Stewart derived statements of the role of dental colleges from a review of

¹Helmer, Social Technology, p. 16.

²Weatherman and Swenson, "Delphi Technique", p. 98; Wayne Albert Jones, "An Analysis of Special Education Needs Assessment Using Delphi Methods", (Dissertation Abstracts 34A: 4039 January 1975).

³Frederick Cyphert and Walter Gant, "The Delphi Technique: A Case Study" (Phi Delta Kappan LII, January 1971, pp. 272-273); Norman Uhl, "Encouraging Consensus of Opinion Through Use of Delphi Technique in Process of Identifying Institutional Goals" (Bethesda, Md. ERIC Document Reproduction Service, ED 048 713, 1970).

⁴Mary Virginia Curran, "Use of Delphi to Determine Priority of Needs for Changes in College Student Environment" (Dissertation Abstracts 33A: 4870 March 1973); Melwyn Lewis Raimon, "Identification and Hierarchical Classification of Competencies and Objectives of Student Teaching in Music Through a Partial Delphi Survey" (Ph.D. Dissertation, University of Connecticut) 1975.

literature and consultation with an advisory committee.¹

To summarize, the initial round was usually a questionnaire, but experimentation with other techniques occurred.

Format of Response

The format of the response depends upon the format of the question and the nature of the study. Delphi is useful to obtain preferential rating as in the American Home Economics Association study, which used a rating from 9, indicating full support, to 0 indicating no support for the concept.² Many studies have used a Likert-type response varying from four criteria to seven. Rumble found the Q sort rating scale acceptable in his comparative study with the Likert scale. However, the response to Q sort was only 52%, but the response to the Likert questionnaire was 63% complete.³

¹Arthur Van Stewart, "A Delphi Analysis of Intramural Practice Programs in American Dental Schools", Dissertation Abstracts 34A: 6420, March - April, 1974.

²Lee, "Future of Home Economics".

³Frank Eakes Rumble, "A Comparison of Likert and Q Sort Rating Scales in Delphi Technique", Dissertation Abstracts 36A: 653, July - August, 1975.

In addition to open ended questions, preferential rating Likert-type and Q sort response were used.

Number of Rounds

Helmer designed a four round sequence of questionnaires.¹ The writer found that in the forty-nine doctoral dissertations reporting the number of rounds, there were eleven using a four round sequence, thirty-four using three rounds, and four using two rounds. Cyphert and Gant found that change in consensus occurred by round three. Clark and Coutts, Gazzola and Uhl supported this.² Sweigert and Schabaker tested the convergence to consensus with a split sample and found greater convergence occurred in round two than in later rounds.³ Four research studies reported the use of only two rounds: the Sweigert-Schabaker study, Lee, Brooks, and Gordon.⁴

In summary, the majority of studies modified the number of rounds to three.

¹Helmer, Social Technology.

²Cyphert and Gant, "Delphi Technique"; S. C. T. Clark and H. T. Coutts, "The Future of Teacher Education", (Journal of Teacher Education, 22, Winter 1971, pp. 508-516); Gazzola, "Effect on Planning"; Uhl, "Consensus Delphi Identifying Goals".

³Ray Sweigert and William Schabaker, "Delphi Technique: How Well Does It Work in Setting Educational Goals?", (Bethseda, Md., ERIC Document Reproduction Service, ED 091 415, 1974).

⁴Ibid., "Delphi Technique"; Lee, "Future of Home Economics"; Walter Brooks, "Nor Cal Research Group Vocational Education Study", (Bethseda, Md., ERIC Document Reproduction Service, ED 069 276, 1972); Theodore Gordon, The Future, (New York, St. Martin's Press, 1965).

Interval Between Rounds

Another procedural question was related to the length of time between rounds. Helmer used two months between rounds for an international study, but recommended that the time be shortened.¹ The spread was from five weeks for a four round study in a local area, conducted by Gazzola and Griffiths, to four months for four rounds reported by Carey.² H. W. Jones and Lee reported difficulty maintaining the time schedule.³ Rickman preferred the telephone follow up to a postcard follow up.⁴ Faherty used personal delivery and had a 99.9% return.⁵

It was advantageous to plan to prevent time delay.

¹Helmer, Social Technology, p. 90.

²Gazzola, Effect on Planning; Edwin Herschel Griffiths, "The applicability of Delphi Technique as a Method of Establishing Educational Goals", (Dissertation Abstracts 34A: 2963, November - December, 1973); Dennis Michael Carey, Assessment of Future In-Service Training. "Needs of School Principals in Massachusetts Delphi Study", (Dissertation Abstracts 33A: 4712, March 1973).

³Homer William Jones, "An Investigation of Effects of Feedback on Variability and Control Tendency of Group Opinion While Employing Delphi Technique", (Dissertation Abstracts 34A: 2361, November - December 1973); Lee, "Future of Home Economics".

⁴Linda Wickin Rickman, "Consensus Formation on Educational Changes Using Modified Delphi Technique", Dissertation Abstracts 35A: 4094, January 1975.

⁵James Gregory Faherty III, "A Value Assessment of Long Term Future by Selected Groups in a School District Using Focus Delphi Technique", Dissertation Abstracts 36A: 1206, September - October, 1975.

Advantages of Delphi Method of Forecasting

The original purpose of the Delphi method was to predict the future. Helmer found that through anonymity psychological factors, such as, the expression of opinion by a dominant person and the "bandwagon" effect were avoided. Haydon supported this, stating that the appeal of a Delphi study was to logic rather than to authority.¹ Baier and Rescher found Delphi to be systematic and rational.²

Enzer found Delphi method improved communication; especially across status lines, stated Curran.³ Perceptual communication barriers were reported reduced in the Davis Study.⁴ Griffiths observed improved community to school communication.⁵

The early studies, dealing with social issues, noted that it was less costly to conduct a Delphi study, than to assemble experts from around the world.⁶ Johnston avoided time-consuming committee meetings and rigid schedules by using the Delphi method.⁷

¹Helmer, Social Technology, p. 16; Brownlee Haydon, "The Year 2000, (Santa Monica, Rand Corporation, P-3571, 1967, p. 8).

²Kurt Baier and Nicholas Rescher, Values and the Future, New York, Free Press, 1969, p. 5.

³Selwyn Enzer, "Delphi and Cross Impact Techniques" in F. Tugwell (ed.), Search for Alternative Futures (Cambridge Mass., Winthrop 1973); Curran, "Priority Changes in College Environment".

⁴Davis, "Land Use Forecasting".

⁵Griffiths, "Delphi Establishing Goals".

⁶Helmer, Social Technology, p. 84.

⁷D. F. Johnston, "Social Indicators and Social Forecasting", in S. Popper, Imaging Alternative Futures.

Weatherman and Swenson observed that Delphi was considered an interesting task by panel members. Carey supported this, attributing the interest to information feedback.¹

Disadvantages of the Delphi Method of Forecasting

Some limitations have been found with the panels. Enzer noted that participants did not describe research findings, nor give proprietary information, because anonymity prevented recognition.² Bernstein and Weaver suspected distortion due to the selection of participants.³

Researchers such as Malone stated that consensus may be contrived.⁴ Womble described Delphi as a "conformity movement"⁵, and requested respect for those who differ.

Baier and Rescher found framing the questions a limitation.⁶ Helmer noted that precise questions require legal-type phrases which

¹Weatherman and Swenson, "Delphi Technique"; Carey, "Assessment of In-Service Training".

²Enzer, "Delphi and Cross Impact Techniques", p. 154.

³G. Bernstein, "A Fifteen Year Forecast of Information Processing Technology", (Washington, D.C., Naval Supply System Command, U. S. Government Printing Office, 1969); T. Weaver, "An Exploration into the Relationships between Conceptual Level and Forecasting Future Events" (Ph.D. Dissertation, Syracuse University, 1969), quoted in Weatherman and Swenson, "Delphi Technique", p. 111.

⁴William F. P. Malone, "A Study of Delphi Technique as an Instrument for Establishing Curriculum Revision Criterion in Dental Schools", Dissertation Abstracts 34A: 3032, November - December, 1973.

⁵Dale Womble, "Reactions from Delphi Study", Journal of Home Economics, 66 (January 1974), p. 2.

⁶Baier and Rescher, Values and the Future, p. 8.

are cumbersome.¹ Welty thought that experimenter bias occurred when openended questions were converted to codable form.² Clinch questioned the degree of objectivity in Delphi studies.³ Lipsitz ascribes difficulty in interpretation to the narrative nature of the topic. Malone supported this, noting semantic difficulty in communication.⁴

In addition to disadvantages and disagreements put forth under earlier headings, Cyphert and Gant observed that the Delphi method can be used to mold opinion and to collect it.⁵ Welty found that the Delphi instrument resisted manipulation.⁶ Lipsitz declared that Delphi method was not a change agent.⁷

¹Helmer, Social Technology, p. 90.

²Welty, "Problems Selecting Experts".

³Robert Clinch, "A Delphi Method for Establishing a Social Work Curriculum: An Exploratory Study", (Ph. D. Dissertation, Syracuse University) 1974.

⁴Alvin Herbert Lipsitz, "Delphi as an Intervention Technique in Developing a Plan of Change for a Student Affairs Office at Ohio State University" (Dissertation Abstracts 33A: 4125, January - February, 1973); Malone, "Curriculum Revision Criterion".

⁵Cyphert and Gant, "Delphi Technique".

⁶Welty, "Problems Selecting Experts".

⁷Lipsitz, "Delphi as Intervention".

It was evident that Delphi method was controversial, that there was opportunity for further research.

Research Components

In addition to the method and modifications discussed above, and definition of terms discussed in the introduction, observations about variables and statistical analyses were considered.

Variables

Weatherman and Swenson identified procedural variables for a Delphi study as (1) item (this is related to the topic of study), (2) interval between rounds, (3) method of reporting, (4) number of rounds, (5) interrelationship between events.¹

Welty described the selection of experts as a structural variable.²

Statistical Analysis

Helmer used the median and upper and lower quartile for each round to show the amount of dissensus.³ The review of literature indicated an increasing use of other statistical processes.

¹Weatherman and Swenson, "Delphi Technique", pp. 107-111.

²Welty, "Problems Selecting Experts".

³Helmer, Social Technology, p. 49.

Since World War II research in the future has increased, as shown by the formation of the World Futures Society, which publishes The Futurist; the establishment of the Institute for the Future, the Mankind 2000 offices in Europe, and the Club of Rome; and the publication of the research journal Futures.

Next some recommendations for the future of family life education in the province of Saskatchewan were considered.

SASKATCHEWAN REPORTS ON FAMILY STUDIES, 1973 TO 1975

Concern for the institution of the family in Saskatchewan was recorded in two committee reports filed with government departments, in a local inquiry, in the annual reports of Family Life Saskatchewan, and in a report on the role of the College of Home Economics.

An Analysis of the Report of the Minister's Advisory Committee on Family Life Education

The Saskatchewan Minister of Education ordered establishment of an Advisory Committee on Family Life Education on 15 October 1973. The terms of reference for this advisory committee were: to make recommendations concerning family life education in the school and community, to examine present curricula in the formal school system, to recommend content for family life curricula, and to suggest where to locate family life education in the school program. Direct contributions from community organizations, and indirect programs which strengthen the family were to be studied.¹

The final report of the Advisory Committee on Family Life Education was filed on 14 November 1974. In addition to attending regular meetings with guest speakers, the ten committee members, later expanded to twelve, reviewed the literature of family life education, conducted thirty-two hearings at which more than two hundred briefs and letters were presented, and visited sixteen schools in Saskatchewan.

¹Saskatchewan Department of Education, Report on Family Life Education, pp. i-ii.

The report made reference to the Citizens School Inquiry¹ held in Saskatoon, Saskatchewan in January and February 1973, in which a need was expressed for increased family life education in elementary and secondary schools.

The recommendations of the Minister's Advisory Committee on Family Life Learning were set out in the present review according to recommendations for formal and non-formal learning systems. There were no recommendations for informal learning systems.

Formal Learning Systems

In Saskatchewan, the formal learning system included Kindergarten, Division I (Formerly grades 1, 2, and 3), Division II (formerly grades 4, 5, and 6), Division III (formerly grades 7, 8, and 9), and Division IV (formerly grades 10, 11, and 12).² There were two public universities offering baccalaureate degrees, graduate work, and extension classes.³ Other formal institutions included eleven community colleges, three institutes of applied arts and science⁴, and some private institutions.

¹Saskatoon, Citizen's School Inquiry Committee Report, 1973, p. 20.

²Saskatchewan Legislature, Statutes 1964, March, Ch. 19, An Act to Amend the School Act.

³Saskatchewan Legislature, Statutes 1974, May, Ch. 18, An Act Respecting the Universities Commission, sec. 2(b).

⁴Department of Continuing Education, Annual Report for the Fiscal Year Ended 30 June 1975, p. 1.

Recommendations were made for family life education from Kindergarten through Division IV¹; for teacher training, by the addition of a compulsory introductory class for elementary and high school teachers; and for university education.²

Seventy per cent of the briefs supported key recommendation five³, which suggested that family life content be integrated into existing subjects in Division I, II, and III, and be taught as a separate, compulsory half class in Division IV. Content areas should center on: the family type and life cycle; values; goals and objectives of families; homemaking; maturation and relationships; developing skills in decision making; conflict resolution; coping; and communication. These areas were suggested: as components for the compulsory half class in Division IV, as individual mini-courses combined to meet individual interests, and as the base for a teacher training program.⁴

Recommendations for content areas in an introductory course for all elementary and secondary teachers included: values, goals and objectives of families, communication skills, interpersonal relationships,

¹Saskatchewan Department of Education, Report on Family Life Education, Chapter IV, pp. 14-23.

²Ibid., Chapter V, pp. 24-29.

³Ibid., pp. 15 and 30.

⁴Ibid., pp. 16-23.

civil rights, censorship, contemporary society, and growth in the life cycle.¹ In-service programs for teachers were recommended, with provision of bursaries for those who attend.²

The recommendation to involve rural and urban community members in curriculum planning³ gave support to the use of a Delphi study to determine opinion.

Consideration was given to a name other than Family Life Education. Suggestions included Life Education, Education for Living or Life Issues.⁴

A final suggestion for formal education was that consultative services should be provided by the Department of Education.⁵

Twenty-one per cent of the briefs were concerned with the community and family life education in the institutional environment. Recommendations were made for evening sessions and workshops, to familiarize the community with the family life education programs for schools. Such adult sessions might assist in evaluating the Division I to IV family life program and provide follow through for Division IV graduates.⁶ It was observed that the community recreation boards, the

¹Ibid., pp. 25-29.

²Ibid., p. 29.

³Ibid., pp. 10 and 30.

⁴Ibid., p. 18.

⁵Ibid., p. 29.

⁶Ibid., pp. 2-3.

Lighted School House Program, and community colleges might organize such programs.¹

Components for adult education programs listed in the Report of Minister's Advisory Committee on Family Living Education included: living with stress, parent education, stages in growth from birth to old age, how to teach sex education to children, interpersonal relations, values clarification, decision-making, conflict resolution, hobbies, and communication skills.²

Non-Formal Learning Systems

Family Life Saskatchewan was the outcome of a parent education workshop in 1972.³ This group gave support to services for families. The Minister's Advisory Committee on Family Life Education recommended that the work of this volunteer group be expanded by incorporation, and provision of funds for staffing. Such functions as: research development, needs assessment, evaluation of pending legislation, promotion of conferences, and use of speakers, resources, and coordination of marriage preparation courses were listed.⁴

¹Ibid., p. 13.

²Ibid., p. 12.

³Family Life Saskatchewan, Annual Report of the Fiscal Year Ending June 30, 1973.

⁴Saskatchewan Department of Education, Report on Family Life Education, pp. 8-9.

A model for family life education developed by Family Life Saskatchewan proposed three levels of learning:

Level 1: The Individual and the Family

Content recommended is communication skills, retirement preparation, parenting skills, child development, marriage preparation, nutrition, and sexuality.

Level 2: The Family and Society

Concepts included are budgeting, consumer education, leadership skills, and community support groups.

Level 3: Society and the Family

Recommended content is social change alternative life styles, values, and community planning.¹

¹This is a summary by the writer from Family Life Saskatchewan, Annual Report 1973.

This section of the review of literature is summarized by key resolutions quoted from the Report of the Minister's Advisory Committee on Family Life Education, 1974. The recommendations included:

- (1) A comprehensive family life education program be initiated in Saskatchewan communities and schools.
- (2) Family Life Saskatchewan be incorporated; its role be expanded; finances to expand its role and provide for some staffing to be provided by the Government of Saskatchewan.
- (3) As quickly as possible, steps be taken to involve members of local communities, both rural and urban, in curriculum planning, especially in the area of family life education.
- (4) More family life education offerings be made through Community Colleges, the Extension Division of the Universities and church and community groups.
- (5) A family life education program be developed for Saskatchewan schools which would be integrated with existing subjects for Kindergarten and Divisions I, II, and III, and be a separate subject area for Division IV.
- (6) A teacher training program in family life education be launched.
- (7) Adequate family life education consultative services be provided through the Department of Education.¹

The Minister's Committee on Family Life met three times with the Family Planning Advisory Committee.² The report of this committee to the Committee of Ministers on Family Planning was considered next.

¹Saskatchewan Department of Education, Report on Family Life Education, p. 30.

²Saskatchewan Department of Health, Report of the Family Planning Advisory Committee to the Committee of Ministers on Family Planning, April 1975, p. 8.

An Analysis of Report of the Family Planning Advisory Committee to the
Committee of Ministers on Family Planning, 1975

The terms of reference for the Family Planning Advisory Committee did not refer to education. However, the Minister of Education was a member of the Committee of Ministers to whom the Family Planning Advisory Committee reported. Other ministers in the committee were Ministers of Health, Social Service, Culture and Youth, and Northern Saskatchewan. The Family Planning Advisory Committee included nurses, television managers, ministers, social workers, educators, doctors, representatives from the Family Planning Association of Saskatchewan, the Indian Women's Association, and Native Women's Association. Because family planning was "an integral part of family life"¹, the committee made seven recommendations concerning education in family life as follows:

8. That the teaching of family life education as an integral part of the basic kindergarten through grade 12 curriculum be promoted, assisted and encouraged by the Department of Education.
9. That preparation should start at once to educate the community about the family life education program and to explain the purpose and content of the curriculum prior to its implementation.
10. That the curriculum for family life education include the following topics:
 - a. Families
 - b. Communication
 - c. Sexuality as part of growth and development
 - d. Achieving responsible adulthood and maturity
 - e. Family planning and the care of children
 - f. The middle-aged and the elderly
 - g. Death and dying

¹Saskatchewan Department of Health, Report of the Family Planning Advisory Committee to the Committee of Ministers on Family Planning, April 1975, p. 8.

11. That this curriculum be taught by discussion, not emphasizing the personal values of the teacher, but rather recognizing the values of individuals and the ethical implications of the subject matter.
12. That the Department of Education develop course content and teaching aids in the subject of family life education and encourage their use.
13. That the Department of Education assist in the preparation of teachers by providing in-service education and teachers' institutes on the subject of family life education.
14. That family life education opportunities be expanded in the community. Community Colleges should be encouraged and assisted, if necessary to make such classes available.¹

Under the heading Professional Education² recommendations were made for training professionals involved in counselling and for educators. The use of media to provide information was encouraged.³ The Department of Health staff, which includes nutritionists, should be made available for community programs in sex education and to provide counselling.⁴ Recommendation 43⁵ referred to provision of economic counselling for families and individuals who requested such service. Research in the

¹Ibid., pp. 13-14, recommendation numbers are the numbers used in the report.

²Ibid., p. 14.

³Ibid., p. 16.

⁴Ibid., p. 19.

⁵Ibid., p. 23.

training of professionals and in evaluation of programs in family planning should be supported.¹

In addition to the recommendations the report included a history of family planning in Canada and in Saskatchewan, a statement of the philosophy of the Family Planning Advisory Committee on family planning and sexuality, and a report of the work of the committee.²

The committee held twenty meetings, reviewed twenty-seven briefs and letters, and commissioned the Research and Planning Staff of the Department of Health to conduct a telephone survey of the general population on knowledge about family planning and attitudes towards it. A second study surveyed physicians' practices in family planning. From these studies, and throughout the deliberations, there was indicated both need for, and support for, family life education.

A Report on the Role of the College of Home Economics at the University of Saskatchewan listed guidelines for future activities of the College of Home Economics. Those related to family life education are considered.

An Analysis of a Report on the Role of the College of Home Economics at the University of Saskatchewan

Five purposes were stated in the terms of reference for the Role Study Committee in A Report of the Role of the College of Home Economics at the University of Saskatchewan (1975) as follows:

¹Ibid., p. 27.

²Ibid., pp. 3-9.

1. To define the role of the College of Home Economics in meeting the needs of the province of Saskatchewan in the next decade as it relates to undergraduate education, graduate education and research, extension and community service.
2. To establish enrollment projections for the next decade and give the basis for the projection.
3. To examine the curriculum and programs as they relate to objectives and resources, and to other academic units on campus.
4. To study the relationship of the College to other groups on campus, in particular the Colleges of Arts and Science, Education, Agriculture, Medicine, and the Extension Division.
5. To consider the utilization of the present resources of the College including budget and to cost any new proposals.¹

The purpose of the present review was to excerpt from A Report of the Role of the College of Home Economics at the University of Saskatchewan (1975) those recommendations relating to development of a program in family studies. These suggestions were classified as to: need for a program in family studies, purpose of a program in family studies, possible titles for a program in family studies, course groupings, and research.

¹Committee to Consider the Role of the College of Home Economics, A Report on the Role of the College of Home Economics at the University of Saskatchewan, May 1975, p. ii.

Needs for a Program in Family Studies

In a content analysis of the forty seven briefs and letters submitted to the Role Study Committee of the College of Home Economics, University of Saskatchewan, the writer found thirteen references to the need for a program in family studies.¹ The needs included counselling for rural families, families of the lower economic group on welfare, and ethnic families.

Reference was made to the need, for home economists specializing in work with families, to be familiar with the legislation in the Family Services Act², which regulated care of children and adoption practices; the report of the Saskatchewan Legal Aid Committee³, which recommended establishment of a legal aid scheme to be carried out by workers, including para-professional personnel⁴, knowledgeable in such areas as: housing, finance, and nutrition; and with the projects of the Law Reform Commission of Saskatchewan, which have stressed research for needed reform in matrimonial property laws, family laws, personal property security laws, and consumer credit law.⁵

¹Wanda Young, "A Content Analysis of a Report on the Role of the College of Home Economics at the University of Saskatchewan", Unpublished paper, 1975.

²Saskatchewan Legislature, Statutes, April 1973, Ch. 38, An Act Respecting Family Services.

³Saskatchewan Legal Aid Committee, Report of the Saskatchewan Legal Aid Committee, March 1973.

⁴Ibid., p. 5.

⁵Law Reform Commission of Saskatchewan, Annual Report, 1975.

Purpose of a Program in Family Studies

From the submissions and discussions the Role Study Committee of the College of Home Economics at the University of Saskatchewan concluded that a new area of specialization should be initiated with the purpose of approaching the study of home economics from the social science and psychological perspective.

Possible Titles for a Program in Family Studies

In addition to the title "Family Studies", which was given preference, the following titles were suggested: Family Living, Human Environment, Human Resources, and Man's Environment¹. Family Studies was the title used in the universities in the adjoining provinces.

Course Groupings for a Program in Family Studies

A Report on the Role of the College of Home Economics at the University of Saskatchewan, 1975 included a statement that admission standards to the Family Studies program reduce emphasis on science requirements. The suggested requirements for the degree included the basic freshman and sophomore years and specialized classes in psychology, sociology, and family relationships.² A content analysis of the briefs and letters submitted to the Role Study Committee at the College of Home Economics, University of Saskatchewan, included a recommendation for a multidisciplinary study, including classes: home economics, social work, law, psychology, sociology, economics, physiology, religion, anthropology,

¹Report of Role, p. 16.

²Ibid., p. 16.

philosophy, medicine, child development, retirement preparation, non-traditional families, women's studies, and societal issues.¹

Research

One of the submissions to the Role Study Committee pointed out, "There are many unanswered questions in fields pertaining to life in Saskatchewan".² The Role Study Committee of the College of Home Economics at the University of Saskatchewan noted that home economics is concerned with the multi-faceted aspects of family life. Consequently, the College of Home Economics should accept the responsibility of research into family problems in Saskatchewan.³

The present review concluded with those recommendations listed in the summary of A Report on the Role of the College of Home Economics at the University of Saskatchewan that related to a program in family studies.

Facilities, Budget and Staffing

- #2. Since it is expected that some six to eight classes in the Family Studies Program will be added new to the College curriculum, three additional faculty members competent in this field, should eventually be added to the College faculty. One of these should be appointed in 1976-1977 to facilitate the planning, preparation and counselling of students prior to the program getting under way. The other appointments could be made when circumstances seemed to warrant it.

¹Young, Content Analysis.

²Report of Role, p. 22.

³Ibid., p. 23.

Undergraduate Teaching

- #9. There should be a new specialized program under some such name as "Family Studies". Three new faculty appointments in this area should eventually be sought. One should be made in 1976/77; the other two as programs seem to warrant it.
- #10. Differentiation between "General Program" and "Family Studies" program should take place in years 3 and 4.
- #11. All first year students should take common programs of four half classes in home economics. These classes should represent major divisions of the discipline.
- #13. Science requirements and science admission standards presently asked for should be retained for students proposing to take General Program, Dietetics and Nutrition Program, Food Science Program, but they should not necessarily apply to students proposing to take the Family Studies Program.
- #25. The extension program of the College should be directed essentially "at professionals in the field" not at the public at large.
- #27. The College should seek to continue and increase its participation in interdisciplinary programs.¹

Conclusion

From the discussion of the Report of the Minister's Advisory Committee on Family Life Education, 1974 and A Report on the Role of the College of Home Economics at the University of Saskatchewan, 1975 concepts were drawn for objectives, course groupings and content topics which were tested by a Delphi panel for consensus of opinion.

In the future, the University of Saskatchewan may initiate such a program. Next, writings on a future for family studies programs were considered.

¹Report of Role, p. 33.

THE FUTURE AND FAMILY STUDIES PROGRAM DEVELOPMENT

This section considered writings about the future of the family and the future of education. Thought was given to the integration of family studies content into curriculum development.

Nash and Ducharme¹ reviewed writers such as Riesman, Heilbroner, and Bell who forecasted change to a post-industrial society. Nash and Ducharme postulated that an educator in post-industrial society needed to be a human service specialist with knowledge from several human service areas now seen as distinct, with political sense, and committed to use resources to solve society's problems. Daniel Bell² stated that in post-industrial society more of the life span would be spent in organizations that educate in non-formal style, rather than in traditional formal learning.

Articles reviewed by Mary Rainey³, indicated that non-formal education is a useful way to update professionals, and prepare persons for a second career, added Mathies.⁴

¹Robert J. Nash, Edward R. Ducharme, "A Future Perspective on Preparing Educators for the Human Service Society", Teachers College Record 77 (May 1976), pp. 441-472.

²Daniel Bell, "The Coming of the Post-Industrial Society", Educational Forum XL (May 1976), pp. 575-579.

³Mary C. Rainey, "Non-formal Education: Definitions and Distinctions", Interaction ECO VI (Winter 1976), pp. 1-3.

⁴Lorraine Mathies, "Citings on the Educational Horizon", Educational Forum 54 (Fall 1975), pp. 67-68.

Tyler, Small, the editor of Education, Yule, and Goldberg¹ identified a need for the university, media, businesses, churches, and other agencies to cooperate in offering more people new chances to learn. Silverman studied editors and education journals as creators of the future. He noted a concern about "education for living"² which includes values education, consumer education, career education, and aesthetic education throughout life.

Reviews of literature on the future of the family were made by Burks, Oberto, Weisberg, and the Wall Street Journal³. In summary, the family was assured, but in a smaller, less permanent form, more vulnerable to change. Gunter and Moore⁴ forecasted that the family will change its functions for leisure, life style, and socialization.

¹Ralph Tyler, "Reconstructing the Total Educational Environment", Phi Delta Kappan 57 (September 1975), pp. 12-13; James Small, "Senate Report on the Future of the Extension Function: A Reaction:", New Trial 30 (April 1975), pp. 3-4; Editor "The Open University System", Education (May 1976), pp. 1-VIII; Jamie B. Yule "Expanding Our Concept of Home Economics Education", Journal of Home Economics 67 (May 1975), pp. 23-25; Ruth L. Goldberg, Sidney Goldberg "The Role of the Learning Center on Family Functioning in Social Work Education", Family Coordinator 24 (July 1975), pp. 293-295.

²Robert J. Silverman "The Education Editor as Futurist", Teachers College Record 77 (May 1976), pp. 480.

³Jayne B. Burks "A Study of the Application of Delphi Techniques to the Future of a Social Institution", Ph.d., Saint Louis University, 1973; Angelino Oberto "Montana Home Economics Teachers Perceptions of Selected Societal Trends, Implications for Development of Family Life Curricula", Ph.D., Michigan State University, 1973; Kelly D. Weis "Alternative Family Structure and the Law", Family Coordinator 24 (October 1975), pp. 549-559; The Wall Street Journal LVI (March 18, 1976).

⁴B. G. Gunter, Harvey A. Moore "Youth, Leisure and Post-Industrial Society; Implications for the Family", Family Coordinator 24 (April 1975), pp. 199-207.

Novak challenged those who believe societal trends are detrimental to the family to consider the advantages of the family institution: the family is the main developer of morals; the family provides love, discipline, and laughter, assisting its members to accept reality; the family nourishes trust and develops creativity and psychic energy.¹

In Canada, a concern for the family and the law, the family and society, and the family and change appeared in the popular press.² These concerns were a part of the work of the Vanier Institute of the Family, which reported two conferences on the family and society, the family and the future. In the Alberta conference³, papers forecasted that society will continue to depend upon the family to reproduce and to equip its members to serve society. Participants at a workshop in Ontario⁴ criticized the structured system of society in Canada and pinpointed issues that require study, as: work, leisure, roles of men and women, communication, and the development of social, economic, and political policy that is supportive rather than destructive.

¹Michael Novak "The Family Out of Favor", Harpers 252 (April 1976), pp. 37-46.

²Erna Paris "Marriage Reform", Chatelaine 49 (June, July 1976); Paul Novak "Till Divorce Do Us Part", Macleans 89 (April 19, 1976), pp. 26-31.

³Editor Transition 6 (March-April 1976), p. 2.

⁴Ibid., (June-July 1976), p. 2.

Leland Axelson, Baird, and Keenan and Kerckhoff wrote about background courses and content topics recommended for family studies,¹ supporting those course groupings and content topics recommended in the reports from studies made in Saskatchewan. The National Council on Family Relations suggested the following criteria for teacher preparation of family life educators: the family; family interaction; marriage preparation; human development from birth to senescence; biological sciences (nutrition, physiology, reproduction); sexuality; management of family resources; group processes; methods and materials in family life education; practice teaching in family life education; field experience; individual and family counselling; research methods; survey of basic laws; and community development.²

Cromwell and Thomas pointed out a lack of definition of the parameters of family life education. They defined family life education as "Family life education promotes the delivery, coordination, and integration of family development resources to the individual family unit in order to improve family life."³

¹Leland Axelson "Promise or Illusion: The Future of Family Studies", Family Coordinator 24 (January 1975), pp. 3-6; Joan Baird, Dorothy Keenan, Family Life Education Re-examined: Applications for Teachers, American Home Economics Association, 1971; Richard Kerckhoff, Terry Hancock "The Family Life Educator of the Future", Family Coordinator 20 (October 1971), pp. 315-324.

²Committee on Educational Standards and Certification for Family Life Education "Family Life and Sex Education: Proposed Criteria in Teaching Education", Family Coordinator 19 (April 1970), pp. 183-186.

³Ronald Cromwell, Vicky Thomas "Developing Resources for Family Potential: A Family Action Model", Family Coordinator 25 (January 1976), p. 15.

This definition does answer some of the questions that Babin delineated as the concern of curriculum, not only what should be experienced but why, when, where, and how.¹

Curriculum research was reviewed by Short and Fogarty.² Short noted that the Delphi method can be used to determine values and goal preferences,³ in curriculum development.

Rowse, Howes, and Gustafson decried the traditional method for development of higher education curriculum built upon strengths of the faculty with units added when resources permit. A better approach was to study the needs of the system by defining the role and then to modify it to suit the students and resources. A pilot study based on literature or on an opinion questionnaire (as in the Delphi method) to identify knowledge, attitude, and skill requirements; refined by discussion with individual faculty experts; which included preparation of the student; and was terminated by an evaluation, was recommended.⁴ Page, Jarjoura, and

¹Patrick Babin "New Expectations", Curriculum Connections (Summer 1976), pp. 2-3.

²Edmund Short "Knowledge Production and Utilization in Curriculum: A Special Case of the General Phenomenon", Review of Educational Research 43 (Summer 1973), pp. 237-303; James S. Fogarty "The Tyler Rationale: Support and Criticisms", Educational Technology XVI (March 1976), pp. 28-32.

³Short, Knowledge in Curriculum, p. 262.

⁴Glenwood Rowse, Nancy Howes, and David Gustafson "Role Based Curriculum Development in Higher Education", Educational Technology XV (July 1975), pp. 13-23.

Konapka described a method by which operations research could be used to determine values and costs to evaluate curriculum content.¹

Conclusion

Authors in the literature reviewed supported the continued existence of the family and the need, in Saskatchewan, to provide opportunities to learn about the family, and how to work with individuals in the family. The Delphi method, originally used to forecast is increasingly used to resolve conflicting opinion and to determine policy in complex situations, such as family studies program development.

¹Ellis B. Page, David Jarjoura, and Charles D. Konapka "Curriculum Design Through Operations Research", American Educational Research Journal 13 (Winter 1976), pp. 31-49.

CHAPTER 3

PROCEDURES

The procedures in this study were discussed in three areas:

(1) selection of participants, considering the members of the advisory committee and the Delphi panelists, (2) development of questionnaires, and (3) treatment of data. The last two areas included discussions of the first Delphi round, changes made in rounds two and three, and the mailing to the advisory committee.

SELECTION OF PARTICIPANTS

Members of the Advisory Committee

The purposes of the advisory committee were: to assist with the development of the study, and to evaluate the objectives.

Invitations on College of Home Economics letterhead, were sent to twenty-one persons who were or had been part of the administration of the University of Saskatchewan and the College of Home Economics; who had experience developing curricula at university or high school level and implementing curricula, with special interest in family studies; who were members of one of the three committees who prepared the reports from Saskatchewan included in the review of literature; who had experience with Delphi methodology. Fifteen agreed to participate.

Selection of Delphi Panelists

This Delphi study utilized a specialist group and a generalist group. The population for the specialist group was persons graduating in

home economics and/or family studies, working in formal, non-formal or informal learning situations in Canada. Eighty-eight percent of the specialists, who completed three rounds were from Saskatchewan.

The population for the generalist group was persons with professional training who worked with families in formal, non-formal, and informal learning systems.

Within the specialist and generalist groups were three sections: hierarchical, heterogeneous, and homogeneous. Panelists in the hierarchical section worked in an institution of the formal learning system; panelists in the heterogeneous section educated as consultants; and panelists in the homogeneous section were married or retired, educating in the home.

Lists for 1975-76 were obtained from: Board of Education For Saskatoon Catholic Schools; Board of Education of Saskatoon School District No. 13; Canadian Home Economics Association; Canadian University Teachers of Home Economics; College of Home Economics at University of Saskatchewan staff list; Credit Grantor's Association; Department of Social Services (Saskatoon Region); Department of Youth and Culture (Saskatoon Region); Saskatoon Council of Churches; Saskatoon Public Library; Saskatchewan Department of Education lists of superintendents, teachers of family life and schools teaching home economics; Saskatchewan Home Economics Association; Saskatchewan Home Economics Teachers Association from the Saskatchewan Teachers Federation; University of Saskatchewan Alumnae office, for female graduates, married, and resident in Saskatchewan; and the yellow pages of telephone directories for Moose Jaw, Prince Albert, Regina, and Saskatoon using the headings for architects, associations, churches, clubs, day nurseries, financing, investments, lawyers, physicians,

and social service organizations.

Long lists were reduced by taking the tenth name on each page or every twentieth name. The lists were cross checked for duplication. Random selection was made from the lists using a table of random digits.¹ Table 17 in appendix A, shows the source for each section of the Delphi panel.

An attempt was made to include senior university students in family studies program but the request for names came too late in the academic year. The generalist section might include other professionals such as public health nurses, dentists, and media workers.

An invitation on College of Home Economics letterhead, a response sheet and a stamped return envelope were mailed to 144 persons on 28 April 1976. A sample of the mailing is in appendix B. One hundred and nineteen response sheets were returned. Fifteen were negative. Eleven of the affirmative replies were received after round one was closed, setting the sample at 104.

DEVELOPMENT OF QUESTIONNAIRES

Round One Delphi

Items for the round one Delphi questionnaire were from a review of literature, the method used by Raimon² and others. In addition to the

¹Gene V. Glass, Julian C. Stanley, Statistical Methods in Education and Psychology, Englewood Cliffs, Prentice-Hall Inc., 1970, pp. 510-512.

²Raimon, "Identification of Objectives".

literature reviewed in chapter 2, calendars from Canadian universities and catalogues from universities in the United States that border western Canada provided items. Table 18, in appendix A, shows the source of items used in the round one questionnaire.

In the three part questionnaire panelists were asked to react to 18 objectives, 33 course groupings, and 24 content topics in each of formal, non-formal, and informal learning systems, for a four year program in family studies in a college of home economics. There were a total of 126 items including three demographic items.

A four point rating scale was used in the questionnaire. The categories used for evaluating the importance of objectives, course groupings, and content topics for a program in family studies were: very important, important, slightly important, and unimportant. In the tabulation of data, a numerical value of 4 was assigned to very important; with equal intervals to 3, for important; to 2, for slightly important, and to 1, for unimportant. The use of this Likert-type scale, permitted the assumption that the data may be treated as interval data, and statistical assumptions appropriate to such data could be made. This procedure is based on the Raimon study.¹

The questionnaire was pre-tested by two members of the advisory committee, for meaningfulness to residents of Saskatchewan; and for clarity, as determined by length of statements, format, phrasing of items, ambiguity of thought, and repetition of items. Two objectives were deleted and some phrases were reworded.

¹Ibid, p. 28.

The revised questionnaire was reproduced. Two copies were mailed on 5 May 1976, with a stamped return envelope and a covering letter requesting rating of the item and the addition of objective course groupings, and content topics, to one hundred and thirty-four names on the invitation mailing list, unless a negative reply had already been sent. Panelists were asked to mark both copies, retain one, and return the other. A copy of the round one instrument may be obtained from the author.

At the end of one week, 21 telephone calls were made to those who had not yet responded. On 17 May 1976, 93 responses were taken to SASKCOMP, at the University of Saskatchewan, Saskatoon.

Changes in Round Two Questionnaire

The data analyzed from round one Delphi questionnaire were reported to the Delphi panelists numerically and visually. The numerical report column included the median and below it the third quartile and first quartile, for each item. Numbers were rounded to one decimal point to conserve space.

The visual scale included a verbal description of the ranking: very important, important, slightly important, and unimportant in the heading; with the value 4 assigned to very important, three dots to represent the quarter intervals to the value 3 for important, to 2 for slightly important, and 1 for unimportant. Below the scale, brackets were placed at the closest quarter to indicate the third to first quartile, enclosing M to signify the median. The visual scale was less accurate than the numerical report column. Because the part three page was

crowded the numerical report column was placed in appendix C of the letter. Panelists were asked which report they used. The results appear in table 1.

TABLE 1.--Usefulness of Feedback in Round Two

Description of Feedback	%
Interaction	84.9
Definitions	83.7
Both numerical & visual	50.0
Rank order	40.7
Visual, on scale report	25.6
Numerical report	12.8
Relative frequency (percent) SPSS	

Verbal data from round one Delphi questionnaire were sorted and reported in the appendices to the round two letter, and as additional items in the questionnaire. The appendices included: section A, of definitions requested and supplied by the panelists; section B, of questions and comments entitled "Interaction"; and section C "Statistical Report".

Thirteen objectives were added at the end of part 1, eight course groupings were added at the end of part 2, and nine content topics at the end of part 3. Six demographic and evaluation items were placed at the beginning, to make a total of 175 items. One empty page was supplied at the end of the questionnaire for comments.

After pre-testing, as in round one, two objectives were deleted and the format of the appendices was changed to conserve space. Part one was rechecked by one member of the advisory committee.

Duplication was similar to round one, except that pink bond was used for the questionnaire and white bond for the appendices. The mailing was similar to round one, and went to the 104 persons who had returned affirmative response sheets, on 29 May 1976. A copy of the round two covering letter, and appendices is in appendix D. Round three instrument, in appendix E, included all items in round one and two instruments.

At the end of one week, 21 telephone calls were made to panelists who had not yet responded. On 11 June 1976, 86 responses were taken to Computer Services at the University of Saskatchewan, Saskatoon.

Changes in Round Three Questionnaire

The data analyzed from the round two questionnaire were reported in a numerical report column which included the median, for each item, rounded to one decimal point, and a verbal statement describing the value and the rank according to the mean. The rank for part three was placed in the Interaction section to prevent crowding. Consensus was signified by the letter C. No additional items were added to parts 1, 2, or 3. Forty seven information and evaluation items brought the total to 222 items for round three. Evaluation items were rated, using rating scales designed by Turoff.¹ No provision was made for written responses by the panelists.

¹Murray Turoff, "The Policy Delphi" in Linstone, Turoff, The Delphi Method, pp. 90-92.

Verbal data from round two were sorted and reported in a three part Interaction section including an explanation from the Delphi coordinator and comments from Delphi panelists. Only comments for items with no consensus were reported. For part three, if consensus was reached in two of the three sections, the item was not included in Interaction.

After two rounds of pretesting, similar to round one, rewording was done in the Information and Evaluation, and Interaction sections. Duplication was similar to round one with the questionnaire printed on yellow bond and Interaction on white bond. One copy of the questionnaire, the covering letter, the Interaction section, and a stamped return envelope were mailed on 23 June 1976 to 104 persons. A copy of the third round package is in appendix E.

At the end of one week 26 phone calls were made to participants who had not yet responded. On 3 August 1976, 93 responses were taken to Computer Services at the University of Saskatchewan, Saskatoon. Table 2, shows the number of questionnaires sent and returned across all mailings. The total percentages were 89.4%, 82.6%, and 89.4% for the three rounds.

TREATMENT OF DATA

Round One Delphi

Data derived from the round one Delphi questionnaire were key-punched onto data processing cards by SASKCOMP operators. A programmer from the academic applications group of Computer Services, University of Saskatchewan, Saskatoon assisted with the statistical tests.

TABLE 2.--Response to Delphi Questionnaires

Description	Mailed Out		Round One		Round Two		Round Three	
	Invitation	Rounds	No.	%	No.	%	No.	%
Specialist	75	65	60	92.31	60	92.31	63	96.92
Hierarchy	27	23	20	86.96	19	82.61	23	100.00
Deans	5	4	3	75.00	4	100.00	4	100.00
Faculty, external	5	3	3	100.00	3	100.00	3	100.00
Faculty, internal	5	4	4	100.00	2	50.00	4	100.00
Extension	4	4	3	75.00	3	75.00	4	100.00
Teacher, Family Life	4	4	4	100.00	4	100.00	4	100.00
Teacher, Home Economics	4	4	3	75.00	3	75.00	4	100.00
Heterogeneous	25	20	19	95.00	19	95.00	20	100.00
Homogeneous	23	22	21	95.45	22	100.00	20	90.91
Generalist	69	39	33	84.62	26	66.66	30	76.92
Hierarchy	24	17	15	88.24	14	82.35	14	82.35
Superintendents	5	5	5	100.00	3	60.00	5	100.00
Principals	5	3	2	66.66	3	100.00	2	66.66
High School	5	4	4	100.00	4	100.00	3	75.00
Elementary	5	2	2	100.00	1	50.00	1	50.00
Catholic	4	3	2	66.66	3	100.00	3	100.00
Heterogeneous	22	12	10	83.33	5	41.66	8	66.66
Homogeneous	23	10	8	80.00	7	70.00	8	80.00
Total	144	104	93	89.42	86	82.69	93	89.42

The University of Alberta computer package was used to determine the median, first and third quartiles, and semi-interquartile range for 123 items. The median and third to first quartile were rounded to one decimal point and reported to the panelists in the round two questionnaire.

The mean, variance, and standard deviation were determined using the SPSS package. The means appear in table 24.

Changes in Data Treatment for Round Two Delphi

To save time, round two data were transcribed for processing by the Xerox machine, reread for accuracy, and translated by the Saskatchewan Conversion 1230 program onto data processing cards. The sense sheets were repencilled and rerun to check for missing cases.

The 169 items in parts 1, 2, and 3 were analyzed as in round one to determine the median, first and third quartiles, and semi-interquartile range which was used to determine consensus. If the semi-interquartile range was less than 0.45 this indicated that more than 50% of the subjects were within one interval and that consensus was achieved.¹ The median and consensus are reported in the round three questionnaire in appendix E.

Changes in Data Treatment for Round Three Delphi

The data derived from the round three Delphi questionnaire were prepared for analysis as in round one and two. The University of Alberta analysis for median and semi-interquartile range was not required.

¹Gazzola, "Effect of Delphi on Consensus".

A summary of the statistical procedures used and the purposes for the analysis is in table 3. The 0.05 level of significance was used throughout, "a level at which the data gives good evidence that the true contrast is not zero".¹ Frequencies were obtained to determine percentages for demographic and evaluation data.

Factor analysis was used to determine the models of objectives and course groupings, using data from round three Delphi questionnaire. "In factor analysis the original set of variables are reduced to a smaller number of variables called factors."² In this study the principal factors were rotated by the varimax criterion "to determine interdependencies and to discover structure among the interdependencies".³

All factors greater than 0.400 were considered for interpretation.⁴ Six factors were requested for part 1: objectives on the first trial. Inspection showed two factors had only two loadings near 0.400. Four factors were then requested. One factor was difficult to interpret. The final request was for three factors.

The analysis of part 2: course groupings commenced with a request for twelve factors. One factor had no significant loadings. Five factors had only two significant loadings. The next trial was for six factors. This run was used for interpretation.

¹D. R. Cox, Planning of Experiments, New York, John Wiley and Sons, 1958, p. 159.

²George A. Ferguson, Statistical Analysis for Psychology and Education, Third Edition, New York, McGraw Hill Book Company, 1971, p. 404.

³Ibid, p. 404.

⁴Ibid, p. 425.

TABLE 3.--Summary of Data Analysis

Purpose(s) of Analysis	Data Used	Statistical Routine
Feedback to panelist to encourage consensus	Round 1 and 2 Questionnaire, parts 1, 2, & 3	Median, first and third quartile, semi-interquartile range
To determine rank order of item	Round 2 Questionnaire, parts 1, 2, & 3	Mean
To determine percentage of demographic data	Round 1 Questionnaire, items 131 to 133 Round 2 Questionnaire, items 177 to 183 Round 3 Questionnaire, items 177 to 233	Frequency
To determine framework of objectives	Round 3 Questionnaire, part 1	Factor analysis for 6, 4, and 3 factors
To determine framework of course groupings	Round 3 Questionnaire, part 2	Factor analysis for 12, 6, and 3 factors
To determine differences of groups and sections	Round 3 Questionnaire, parts 1, 2, & 3	Two-way analysis of variance Newman-Keuls one-way analysis of variance
To determine convergence to consensus	Rounds 1, 2, & 3 Questionnaire, common items in parts 1, 2, & 3	Uhl formula
	Items 115, 206, 304	2 x 3 x 3 ANOVA
To determine rank order of part 3	Round 3 Questionnaire part 3	Mean

Two-way analysis of variance was used to determine significant differences among the means of specialist and generalist groups, in hierarchical, heterogeneous, and homogeneous sections. Newman-Keuls one-way analysis of variance was used to determine the specific groups among which differences occurred. Both analyses of variance were run item by item on data derived from the round three questionnaire. The results of the Newman-Keuls one-way analysis were inspected for patterns.

The assumptions of analysis of variance were met by using random sampling within sets and by use of a good metric scale.¹ In this study, sampling was done, using a table of random digits,² on lists from organizations appropriate to the group or section. The Newman-Keuls method for comparing means of groups and sections was selected because it is neither extremely conservative nor liberal.³

Means for all items from rounds one and two were used to determine rank order for feedback to the panelists in ensuing questionnaires. Means for items on round three, parts 1 and 2 were rank ordered to amend the factor analysis. Items in part 3: content topics were ranked to determine priorities of formal, non-formal, and informal learning systems.

¹Stephen Isaac, William Michael, Handbook for Research and Evaluation, San Diego, Robert R. Knapp, 1971, p. 141.

²Glass, Stanley, Statistical Methods in Education and Psychology, pp. 510-512.

³Ferguson, Statistical Analysis, p. 274.

The Uhl formula was used to determine convergence to consensus.¹ This procedure included determining the absolute sum of the distance of each panelist's mean from the mean of all panelists, divided by the mean of all, for each item.

One item from each part was selected for a 2 x 3 x 3 analysis of variance, considering the rounds as repeated measures. Equal cells were necessary. Random procedure from the Scientific Subroutine was used to generate random numbers to select seven panelists in each of the specialist and generalist groups and hierarchical, heterogeneous, and homogeneous sections. The three-way ANOVA procedure in the University of Alberta computer package was used with items 115, 206, and 304. These were selected as they are all concerned with communications, and 206 and 304 had appeared with significant differences in prior tests.

Mailing to Advisory Committee

A statement of the model of objectives and course groupings, and a one page opinionnaire asking for the possible and probable dates of implementation for the program in family studies at the University of Saskatchewan was mailed on 7 August 1976. Copies of the mailing are in appendix F. The data from this mailing are reported in the next chapter.

¹Norman P. Uhl, "Convergence Through Delphi", ED049713.

CHAPTER 4

ANALYSIS OF DATA

The purposes of this study related to objectives, course groupings, and content topics for a program in family studies in a college of home economics and to Delphi methodology. This chapter was concerned with a description of panelists, and analysis of data.

The data findings were presented as follows: results of round one and round two; explanation of coding; examination of research questions: suitability of Delphi method, differences between groups and sections of the Delphi panel, convergence to consensus, and rating of content topics for formal, non-formal, and informal learning systems. Evaluation of the Delphi method and evaluation of the objectives and course groupings, concluded the chapter.

DESCRIPTION OF PANELISTS

Participating in the study were 93 home economists, family studies professionals, and other professionals who worked with families in formal, non-formal, and informal learning systems. Descriptive data derived from the information and evaluation section of the round three Delphi questionnaire were shown in tables in appendix G. Demographic description of the panelists was in table 19. The percentage of these demographic variables: academic level, age, sex, marital status, and number of children within the six sections was reported in table 20. The relationship of the occupation of the

panelists to formal, non-formal, and informal learning systems was reported in table 21. The confidence of the panelist to rate the items of this study was delineated in table 22. Delphi method had been compared with decisions achieved in face to face discussion.¹ Panelists in this study were asked to describe their contribution in face to face discussion. The results are in table 23.

RESULTS OF ROUND ONE AND ROUND TWO

This study used traditional Delphi statistics for feedback. Helmer used the median and interquartile range to report statistics to his panelists.² Consensus was achieved when the semi-interquartile range was less than 0.45, indicating that more than 50% of the panelists were within one interval.³

A summary of those items in which consensus was achieved in rounds one and two appears in table 4. Inspection of table 4 shows that in round one consensus was achieved in a total of 11 items. The consensus about course groupings was entirely in applied areas, with none in pure disciplines. Reasons for this preference could be the topic of further study.

¹Lillyquist, Performance in Human Dyads.

²Helmer, Social Technology, p. 16.

³Gazzola, Effect of Delphi on Consensus, abstract.

TABLE 4A.--Summary of Consensus, Rounds One and Two Part One: Objectives

Description	Round One Semi- Interquartile Range	Round Two Semi- Interquartile Range
To identify and improve conditions contributing to man's health and physiological development	...	0.34
To identify and improve conditions contributing to man's immediate environment	...	0.38
To comprehend social change	...	0.40
To focus on the family as a social unit and on family members as consumers of goods and service	...	0.44
To be responsible for supportive care of individuals at different stages in the family life cycle	...	0.33
To provide training to work with children and families to contribute to the individual becoming a fulfilled and productive member of society	0.42	...
To identify and improve conditions contributing to man's psychological and social development	...	0.33
To be able to apply, in a creative manner, the scientific method to problems of community living	...	0.36
To know the physical and biological needs of family members in their various home settings whether actual or of the substitute institutional type	...	0.32
Total Items with Consensus	1	8

TABLE 4B.--Summary of Consensus, Round One and Two Part Two: Course Groupings

Description	Round One Semi-Interquartile Range	Round Two Semi-Interquartile Range
Anthropology	...	0.44
Chemistry	...	0.36
Child Development	0.31	0.33
Communications	0.31	...
Community Development	...	0.33
Consumer Studies	...	0.35
Design	...	0.36
Economics	...	0.34
Environmental Ecology	...	0.42
Family Development	0.32	0.32
Family Management	0.32	...
Family Finance	0.38	0.44
Housing	...	0.34
Medicine	...	0.44
Philosophy	...	0.35
Psychology	...	0.34
Religion	...	0.36
Retirement Preparation	...	0.36
Sociology	...	0.44

TABLE 4B.--Continued

Description	Round One Semi-Interquartile Range	Round Two Semi-Interquartile Range
Societal Issues	...	0.35
Statistics	...	0.42
Textiles	...	0.41
Women's Studies	...	0.43
Total Items with Consensus	5	21

TABLE 4C.--Summary of Consensus, Round One and Two, Part Three:
Content Topics

Description	Round One			Round Two		
	Semi-Interquartile Range			Semi-Interquartile Range		
	F	N	I	F	N	I
Care of Children	...	...	0.39	0.39	0.43	...
Censorship	...	...	...	0.36	0.36	0.39
Civil Rights	...	...	...	0.37	0.34	0.44
Communication Skills	0.31	...	...	0.32	...	...
Conflict Revolution	...	...	...	0.36	0.36	...
Contemporary Society	...	...	...	0.33	0.43	...
Coping	...	...	...	0.36	0.38	...
Death and Dying	...	...	...	...	...	0.36
Decision Making	...	...	...	...	0.32	...
Family Goals & Objectives	...	...	0.43	0.38	...	...
Family Life Cycle	...	...	...	0.30	0.39	0.40
Family Planning	...	...	...	0.37	0.38	...
Gerontology	...	...	...	0.34	0.39	0.39
Growth & Self Awareness	...	...	...	0.36	0.36	...
Hobbies	...	...	...	...	...	0.33
Interpersonal Relationships	...	...	0.32	...	...	...
Living With Stress	0.37	...	...	...	...	...

TABLE 4C.--Continued

Description	Round One			Round Two		
	Semi-Interquartile			Semi-Interquartile		
	Range			Range		
	F	N	I	F	N	I
Maturation	...	...	...	0.35	...	0.35
Parent Education	...	...	...	0.38	0.39	...
Sexuality	...	...	...	0.39	0.44	...
Teaching Children About Sex	...	...	...	0.34	...	...
Values	...	...	0.29	...	...	...
Community Support Groups	...	...	...	...	0.44	...
Total Items with Consensus	1	0	4	16	14	7

Key F formal
 N non-formal
 I informal

In round two, consensus was achieved in a total of 69 items. After feedback, consensus was lost for: the objective, to provide training to work with children and families to contribute to the individual becoming a fulfilled and productive member of society; the course groupings: communications and family management; and content topics in informal learning systems: care of children, family goals and objective, interpersonal relationships, and values.

The means, standard deviations, and variance were calculated for round one and round two. A table of means is in table 24. To assist panelists make decisions in the two later rounds items were rank ordered according to means. This report was reported in the instrument as shown in appendix E.

EXPLANATION OF CODING

Throughout the analysis of data and in tables in Chapter 4 and the appendices a three digit number identified each item. The first digit identified the part of the instrument and the two latter digits identified the item number within the part. Items are listed in the round three instrument in appendix E.

Part 1: objectives had 18 original items, coded from 101 to 118. Eleven objectives suggested by panelists were coded from 119 to 129.

Part 2: course groupings had 33 original items, coded from 201 to 233. Eight course groupings suggested by panelists were coded from 234 to 241.

Part 3: content topics had 24 original items, coded from 301 to 324 for formal, from 401 to 424 for non-formal, and from 501 to 524 for informal systems. Nine content topics suggested by panelists were coded from 325 to 333, 425 to 433, and 525 to 533 for formal, non-formal, and informal systems, respectively. Table 28 listed the code, labels, and abbreviations associated with each item.

EXAMINATION OF RESEARCH QUESTIONS

This section was concerned with analysis of data about the following research questions: suitability of Delphi method, differences between groups and sections of the Delphi panel, convergence to consensus, and rating of content topics for formal, non-formal, and informal systems.

Suitability of Delphi Method

Question 1: Is the Delphi method suitable to determine objectives for a program in family studies, in a college of home economics?

The data derived from round three Delphi questionnaire, for part 1: objectives were submitted to factor analysis using the Statistical Package For the Social Sciences. From the 29 items, three principal factors, accounting for 32.53% of the variance were extracted. After varimax rotation to determine relationships, item loadings greater than 0.400 were considered meaningful. The varimax solution for objectives was summarized in table 5.

Inspection of table 5, suggested that the first principal factor was human development, with nine primary loadings and one negative loading. These items were interpreted as follows: the graduate in

¹Ferguson, Statistical Procedures, p. 424.

TABLE 5.--Summary of Varimax Solution for Objectives

Factor 1		Factor 2		Factor 3	
Health	0.64	Societal Structures	0.77	Apply theory	0.57
Creativity	0.58	Management	0.72	Courses	0.57
Operations	0.58	Communicate	0.71	Innovation	0.53
Resource use	0.58	Environment	-0.56	Legal	0.47
Care	0.58	Science	-0.51	Physical	0.46
Values	0.52	Change	-0.44	Media	0.41
Disciplines	-0.50				
Decision	0.46				
Social	0.45				
Pre-school	0.42				

Factors greater than 0.40 were significant
 Factors were rounded to two decimal points from five
 Labels identified in table 29

family studies would be able to identify conditions, and assist the individual, in the family, to improve conditions for human development in the following areas: health, creativity and aesthetic appreciation, utilization of goods and services, business operations, care requirements of different age groups, moral values, decisions about resources, and social development; all this to understand the pre-school child, and later stages of the life cycle. If knowledge from the various disciplines contributing to an understanding of family was not integrated the human development objective would not be satisfactorily met.

Inspection of table 5, suggested the second principal factor was communication. There were three primary loadings and three negative loadings in this factor. These items were interpreted to focus on understanding of communication between individuals in the family, at all levels of society, and communication between the family and other societal structures, to help the family and individual carry out responsibilities and obtain rights, with emphasis on the ability to communicate about management of food, shelter, textiles, and human relationships. Unless communication stressed environmental conditions, and an awareness of social change, and was based upon a background of natural and social science the graduates' role would not be satisfactorily achieved.

The third principal factor, was identified as integrative processes. There were six primary loadings in this factor. These items were interpreted as follows: the graduate in family studies would be able to translate scientific knowledge into action, to integrate learnings from one course to another, to think critically about change and the diffusion of ideas, to study the legal process for implications to improve family life, to consider how to make an institutional setting, and a home, meet the needs of family members, and to integrate knowledge about the family for presentation on media and in the press.

Seven items not appearing in any factor were placed in rank order, according to means, as shown in table 6, and examined for any clusters. Although five items ranked high, they duplicated items already loaded in the factors, and were disregarded to meet the criterion of simplicity, which was used, with the criterion meaningful, to decide between six factor, four factor, and three factor analyses.

TABLE 6.--Rank Order, According to Means, of Items not Appearing
in any Factor for Objectives

Objective	Mean (Scale of 4)
Children	3.717
Consumer	3.043
Professions	2.968
Interdisciplinary	2.915
Apply science	2.882
General	2.204
Intercultural	2.194

Summary of question 1: The Delphi method was suitable to determine three major objectives for a program in family studies, at the college level, for the population of this study. These three objectives were human development, communication, and integrative processes.

Question 1.1: Was the Delphi method suitable to determine course groupings for a program in family studies, in a college of home economics?

The data derived from round three for course groupings were submitted to factor analysis and varimax rotation. The summary of the varimax solution for forty-one items in part 2: course groupings is in table 7. Six factors were considered meaningful, accounting for 50.93% of the variance.

Inspection of table 7, suggested that the first principal factor for course groupings was a core of natural sciences and humanities. Primary loadings were obtained for items as follows: biology,

TABLE 7.--Summary of Varimax Solution for Course Grouping

Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Biology	0.74 Family Management	0.87 Textiles	0.86 Food Management	0.70 Non-traditional Families	0.64 Community Development
Chemistry	0.74 Family Finance	0.83 Design	0.75 Computer Science	0.63 Anthropology	0.53 Medicine
English	0.60 Family Development	0.75 Clothing	0.68 Counselling	0.61 Consumer Studies	-0.53 Women's Studies
Physics	0.59 Child Development	0.72 Economics	-0.62 Social Work	0.59 Social Issues	0.45 Food
Religion	0.57 Communications	0.54 Housing	0.61 Government Services	0.57 International Relations	0.42
Physiology	0.53 Law	0.41 Sociology	-0.41 Agriculture	0.49 Psychology	0.41
Human Development	0.52				
Philosophy	0.47				
Environmental Ecology	0.44				

Factors greater than 0.40 were significant

Factors were rounded to two decimal points from five

chemistry, english or french, environmental ecology, philosophy, physiology, physics, religion, and human development. Human development was interpreted as a course in general psychology.

The second principal factor was courses about the family. Items with primary loadings included: child development, communication family development, family management, family finance, and family law.

The third principal factor was identified as courses from home economics. Primary loadings for items in this factor were on: clothing, design, housing, textiles, with negative loadings in economics, and sociology. This was interpreted to mean that unless home economics classes were based on theories from economics and sociology they would not be useful for the graduate in family studies.

The fourth, fifth, and sixth factors were considered as elective course groupings. From 1 to 3 half-classes would be selected from each, according to the interests and career plans of the graduate.

Factor four, with primary loadings in items, as follows: social work, agriculture, computer science, counselling techniques, food management, and government and community services, was entitled methods. The selected methods classes would be required prior to field study.

Factor five, had primary loadings in these items: anthropology, non-traditional families, psychology, societal issues, international relations, with a negative loading on consumer studies. This group added depth in the social sciences and provided background that distinguished a family studies graduate, from a consumer studies graduate. The group was identified as social sciences.

Factor six, with primary loadings in items, as follows:
community development, food preparation, medicine, women's studies was labelled special issues. It was suggested that only one half class be selected from this grouping.

Four items which did not appear in any factor are set out below with the round three mean based on a scale of four in brackets. Panelists recommended retirement preparation (2.946) as a content topic. Statistics (1.946) was recommended as a graduate class, by panelists. Futuristics, (2.011) was considered a questionable fad by panelists. The remaining item, nutrition (3.750) had high priority and should be included.

The six principal factors constituted a tentative model for course groupings for a program in family studies in a college of home economics, which was included with the model of objectives in a mailing to the advisory committee. A copy is in appendix F.

Summary for question 1.1: The use of Delphi method produced six major course groupings for a program in family studies, in a college of home economics, for the population of this study. These were a core of natural sciences and humanities, the family, home economics, methods, social sciences, and special issues.

Differences Between Groups and Sections of the Delphi Panel

This section was concerned with research questions 2, 2.1, and 2.2.

Question 2: Are there significant differences among the means of the ratings by specialist and generalist groups, on objectives for

a program in family studies, when the scores are classified on the basis of hierarchical, heterogeneous, and homogeneous sections?

A summary of items with significant differences for specialist and generalist groups, with hierarchical, heterogeneous, and homogeneous sections was in table 8A. This was drawn from table 25, which listed the two-way analysis of variance results for all items. The results of the Newman-Keuls one-way analysis of variance tests, used to identify sections, involved in interaction and main effects, and patterns of groupings were in table 26.

In the population of this study there was disagreement about certain objectives for a program in family studies. Generalist heterogeneous panelists expected graduates to be able to identify and improve conditions in the environment which was not expected by specialist homogeneous and generalist hierarchical sections. Generalist heterogeneous was the only section with low expectations for training to contribute to individual fulfillment and productivity of children. The generalist heterogeneous section was in opposition to specialist hierarchical and specialist heterogeneous sections about integration of knowledge from various disciplines to contribute to an understanding of family life.

Specialist sections were more favorable to inclusion of an objective to provide interdisciplinary study of family forms than were generalist sections. Specialist sections were less favorable to an objective about advancement of intercultural relations than generalist sections. The specialist heterogeneous section was less favorable to include emphasis on moral values than the generalist hierarchical section.

TABLE 8A.--Summary of Significant Differences Assording to Panel Structure,
Two-Way Analysis of Variance for Part One: Objectives

Description	Significant Source	Significance Level 0.05
To identify and improve conditions contributing to man's immediate environment.	Interaction	0.032
To provide training to work with children and families to contribute to the individual becoming a fulfilled and productive member of society.	Interaction	0.015
To provide an interdisciplinary study of the historical, contemporary and emerging forms through formal coursework and interaction with individuals and families.	Main effects groups	0.025
To help people in all strata of society in the management of their lives with respect to food, clothing, shelter and human relationships.	Interaction	0.048
To be able to integrate scientific knowledge from the various disciplines which contribute to an understanding of family and individual life.	Interaction Main effects groups	0.040 0.038
*To act as a liason and resource person between the individual, the family, the community, and the various professions.	Interaction	0.018
*To comprehend and advance intercultural relations between individuals.	Main effects groups	0.032
*To study the processes by which laws can be improved to better family life.	Interaction	0.018
*To emphasize moral values.	Main effects Main effects sections	0.009 0.019

*Additional items supplied by panelists

There were significant differences among the means for 20.7% of the twenty-nine objectives. The opinions of both hierarchical sections and both homogeneous sections were close for 72.4% and 55.2% of the items, respectively. The opinion of generalist heterogeneous section was favorable in 48.3% and the generalist homogeneous section was unfavorable in 41.5% of the items.

Summary of question 2: Objectives related to the environment, individual fulfillment of children, interdisciplinary studies, intercultural relations, and values, were questioned, especially by generalist heterogeneous panelists. The pattern of opinion was similar for both hierarchical sections and both homogeneous sections.

Question 2.1: Are there significant differences among the means of the ratings by specialist and generalist groups, on course groupings for a program on the basis of hierarchical, heterogeneous, and homogeneous sections?

Inspection of table 8B, for part 2: course groupings showed 5 (12.2%) of the forty-one items had significant differences.

In the population of this study there were only two disagreements about course groupings. The item about communications was rated low by the generalist heterogeneous section, and high by the specialist heterogeneous, specialist homogeneous and generalist homogeneous sections. The differences about the item referring to housing were not great enough to distinguish between the sections.

Within sections there were differences of opinion about child development. The items about design and computer science were questioned within specialist and generalist groups.

TABLE 8B.--Summary of Significant Differences According to Panel Structure,
Two-Way Analysis of Variance for Part Two: Course Groupings

Description	Significant Source	Significance Level 0.05
Child Development	Main effects	0.013
	Main effects sections	0.017
Communications	Interaction	0.015
	Main effects	0.020
	Main effects groups	0.037
Design	Main effects	0.017
	Main effects groups	0.016
Housing	Interaction	0.048
	Main effects	0.038
*Computer Science	Main effects groups	0.008

*Additional items supplied by panelists

Summary of question 2.1: Controversial course groupings were communications, child development, design, and computer science.

Both hierarchical, heterogeneous, and homogeneous sections were close in 58.5% of the items.

Question 2.2: Are there significant differences among the means of the ratings by specialist and generalist groups, on content topics for a program in family studies, when the scores are classified on the basis of hierarchical, heterogeneous, and homogeneous sections?

This question was considered first from the scores on items important in the formal system, next in the non-formal system, and finally in the informal system.

Inspection of table 8C, part 3: content topics showed that in a total of 99 items, 22 for each type of learning system, there were 23 (23.2%) significant differences among the means.

Disagreement of rating the importance of content topics in formal, non-formal, and informal systems appeared most frequently, 36.4%, among the means for items to be taught in the formal system, with 24.2% disagreement about non-formal systems, and only 9.1% about content topics in informal systems.

The generalist heterogeneous section, gave low ratings most frequently, for all three systems and were a part of all interactions except that for family planning in non-formal systems.

Differences existed in opinion about the importance of teaching about death and dying, middle age, and values in formal and non-formal systems; about decision making in formal and informal systems; and about family planning in non-formal and informal systems.

TABLE 8C.--Summary of Significant Differences According to Panel Structure,
Two-Way Analysis of Variance for Part Three: Content Topics

System Description		Significant Source	Significance Level 0.05
Formal System	Civil Rights	Main effects	0.027
		Main effects section	0.020
	Communication Skills	Interaction	0.001
		Main effects	0.001
		Main effects groups	0.001
	Contemporary Society	Interaction	0.004
		Main effects	0.009
		Main effects groups	0.004
	Death and Dying	Main effects groups	0.037
	Decision Making	Main effects	0.012
		Main effects groups	0.019
		Main effects sections	0.050
	Gerontology	Main effects	0.061
		Main effects groups	0.022
	Interpersonal Relationships	Main effects	0.048
		Main effects groups	0.049
	Middle Age	Main effects	0.018
		Main effects sections	0.010
	Sexuality	Main effects groups	0.022
	Values	Main effects	0.018
		Main effects sections	0.010

TABLE 8C.--Continued

Part 3: Continued

System Description		Significant Source	Significance Level 0.05
Non- Formal System	*Community Support Groups	Main effects	0.001
		Main effects sections	0.001
	*Family Breakdown	Main effects groups	0.021
	Death and Dying	Interaction	0.007
		Main effects groups	0.014
	Family Planning	Interaction	0.027
		Main effects groups	0.031
	Gerontology	Main effects	0.011
		Main effects groups	0.004
	Growth and Selfawareness	Interaction	0.006
	Middle Age	Main effects sections	0.040
	Values	Main effects	0.033
		Main effects sections	0.024
	*Civic Responsibilities	Main effects sections	0.029
	*Sexual Therapy	Main effects sections	0.026

TABLE 8C.--Continued

Part 3: Continued

System Description		Significant Source	Significance Level 0.05
In-formal System	Decision Making	Main effects groups	0.037
	Family Planning	Interaction	0.043
	Homemaking	Main effects groups	0.039

Two-Way Analysis of Variance (SPSS)

Significant at 0.05 level

Round Three Delphi Questionnaire

Total number of items is 169, 29 in part 1, 41 in part 2, 33 in each of part 3: formal, non-formal, and informal

Groups are specialist and generalist

Sections are:

1. Specialist hierarchical
2. Specialist heterogeneous
3. Specialist homogeneous
4. Generalist hierarchical
5. Generalist heterogeneous
6. Generalist homogeneous

*Additional items supplied by panelists

Other controversial topics for formal systems included: civil rights, communication skills, contemporary society, interpersonal relationships, sexuality, community support groups, and family breakdown. In addition to topics already mentioned as controversial in non-formal systems, the following lacked agreement: growth and selfawareness, civic responsibilities, and sexual therapy. Homemaking was the only additional contentious topic for informal systems.

Summary of question 2.2: Care was required in selecting content topics. Differences appeared between the generalist heterogeneous section and other sections, and within groups, about teaching the following content topics in formal systems: civil rights, communication skills, community support groups, contemporary society, death and dying, decision making, family breakdown, gerontology, interpersonal relationships, middle age, sexuality, and values.

Differences about topics to be taught in non-formal systems centered on the topics: civic responsibilities, death and dying, family planning gerontology, growth and awareness, middle age, and sexual therapy.

There were differences in opinion about teaching decision making, family planning, and homemaking in the home, the environment of the informal system.

Convergence to Consensus

In addition to analysis of convergence to consensus within the three parts of the questionnaire: part 1: objectives, part 2: course groupings, and part 3: content topics, the results of a statistical experiment using three-way analysis of variance were considered.

Question 3: What degree of consensus, about objectives for a program in family studies, is achieved by specialist and generalist groups, in hierarchical, heterogeneous, and homogeneous sections, across three rounds?

The statistic obtained by applying the formula suggested by Uhl, to eighteen common questions about objectives, in three rounds was listed in table 27. A graphic presentation of convergence to consensus is in figure 1.

Inspection of figure 1 showed round 1 at the highest level, round 2 in the middle range, and round 3 at the lowest level. Examination of table 27, showed convergence in the statistic for 18 (100%) of the items about objectives between both rounds.

Summary of question 3: There was 100% convergence to consensus, on all items about objectives for a program in family studies, across three rounds, in the population of this study.

Question 3.1: What degree of consensus, about course groupings for a program in family studies, was achieved by specialist and generalist groups, in hierarchical, heterogeneous, and homogeneous sections, across three rounds?

Inspection of figure 2, showed crossing or overlapping of lines evident twice for thirty-three items about course groupings. Examination of table 27, part 2: course groupings showed an increase from 11.9 to 13.7, between round 2 and 3, for chemistry. Child development remained stationary between rounds 1 and 2.

The rate of convergence to consensus was 31 (93.9%) between

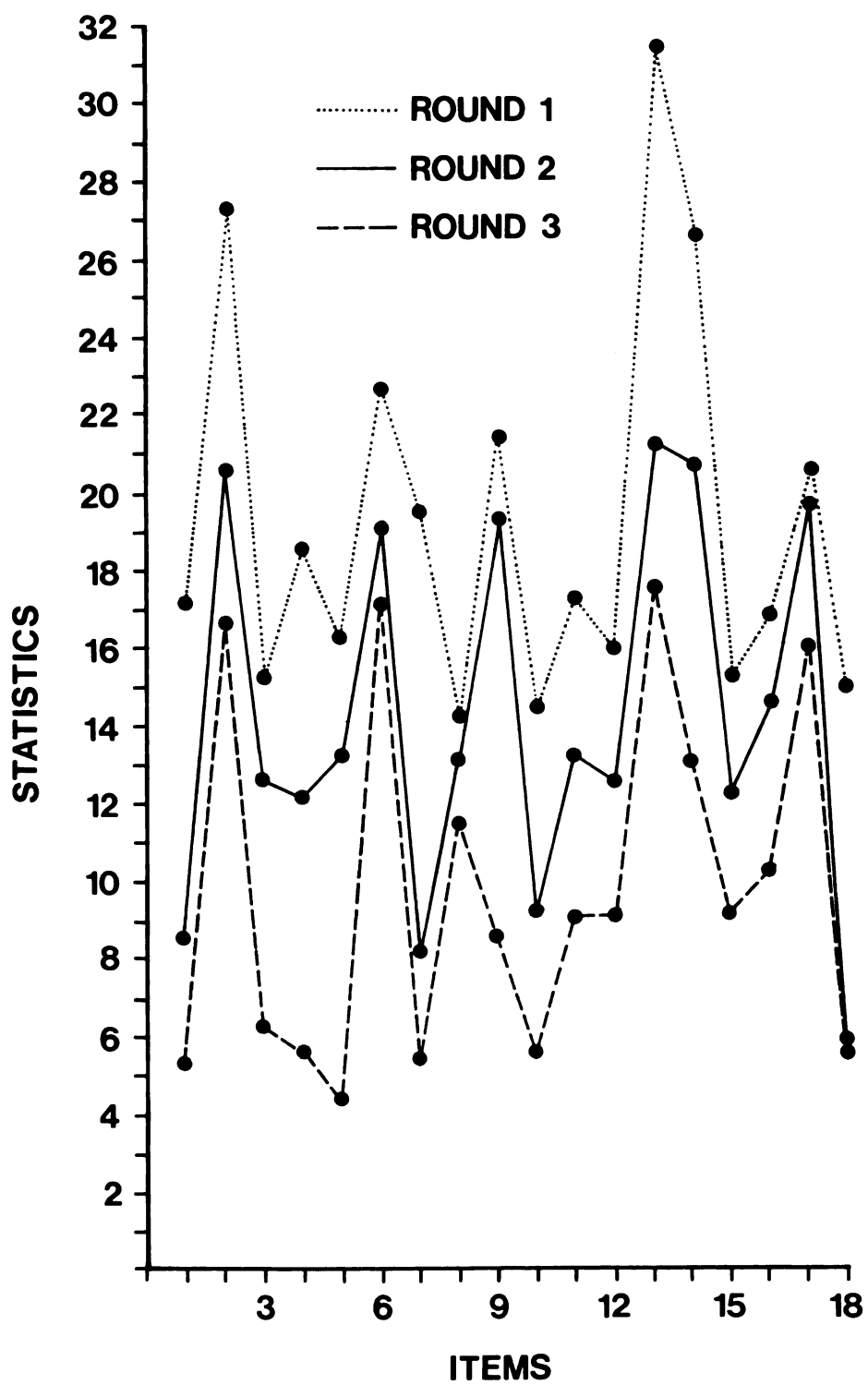


FIGURE 1.--Convergence to Consensus, Part 1, Objectives

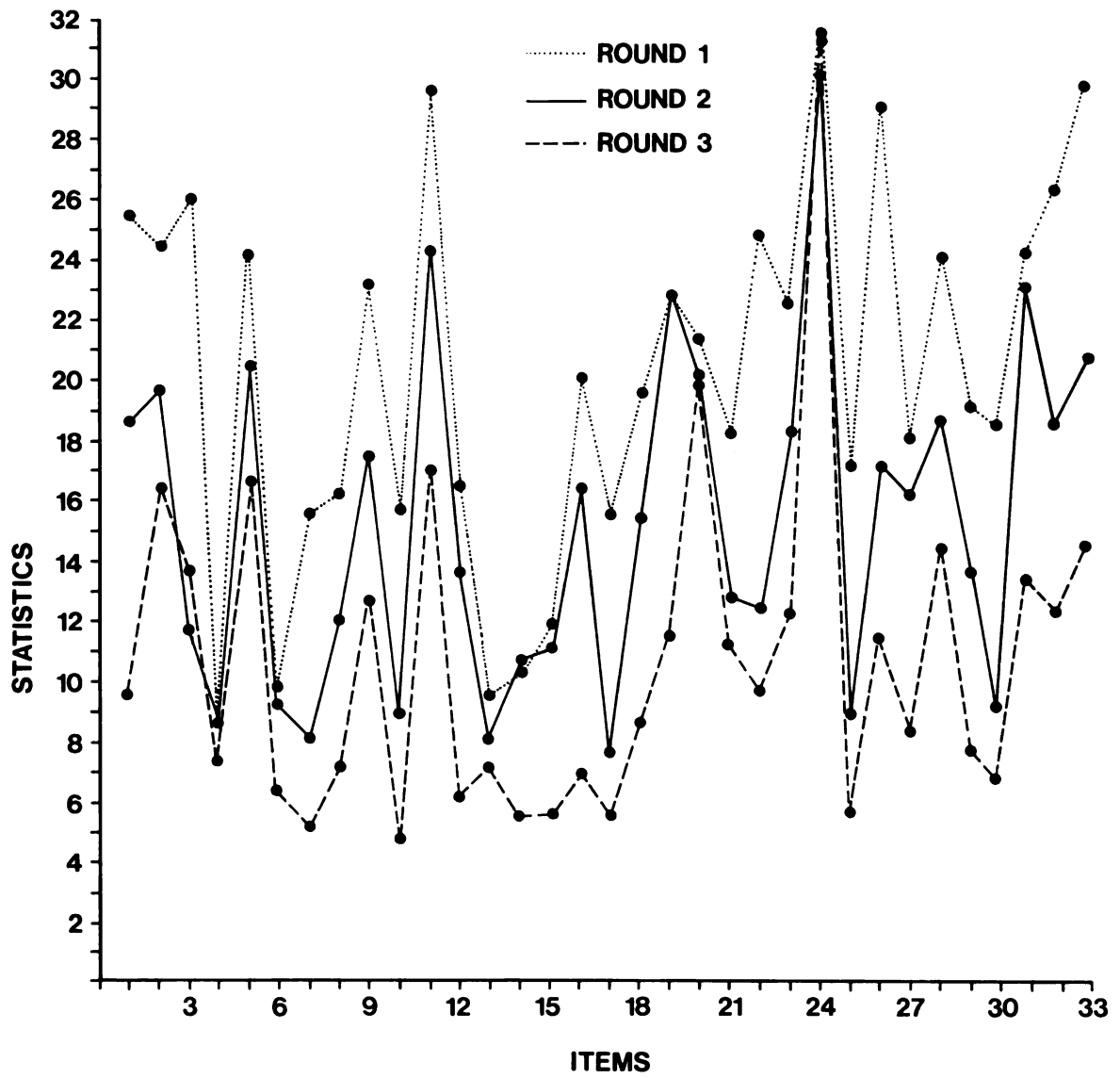


FIGURE 2.--Convergence to Consensus: Part 2: Course Groupings

round 1 and 2, and 32 (96.9%) between round 2 and 3.

Summary of question 3: There was 93.9% and 96.9% convergence to consensus about course groupings for a program in family studies across three rounds in the population of this study. The items in which opinion did not converge were chemistry between rounds 1 and 2, and 2 and 3, and child development between rounds 1 and 2.

Question 3.2: What degree of consensus, about content topics for a program in family studies, is achieved by specialist and generalist groups, in hierarchical, heterogeneous, and homogeneous sections, across three rounds?

Content topics were considered for importance in formal, non-formal, and informal systems.

From inspection of figure 3, it was evident that there was convergence to consensus in all items for importance in formal learning systems. Examination of table 27, indicated 24 (100%) of twenty-four items about content topics converged to consensus between rounds 1 and 2, and rounds 2 and 3.

Lack of convergence to consensus was observed for content topics taught in non-formal systems for death and dying between rounds 1 and 2, and for censorship and hobbies between rounds 2 and 3. The rate of convergence for 24 non-formal items was 23 (95.8%) between rounds 1 and 2, and 22 (91.7%) between rounds 2 and 3.

Figure 5, displayed crossing and overlapping for content topics taught in informal systems, the home environment. Family goals and objectives, and growth and awareness did not converge between rounds

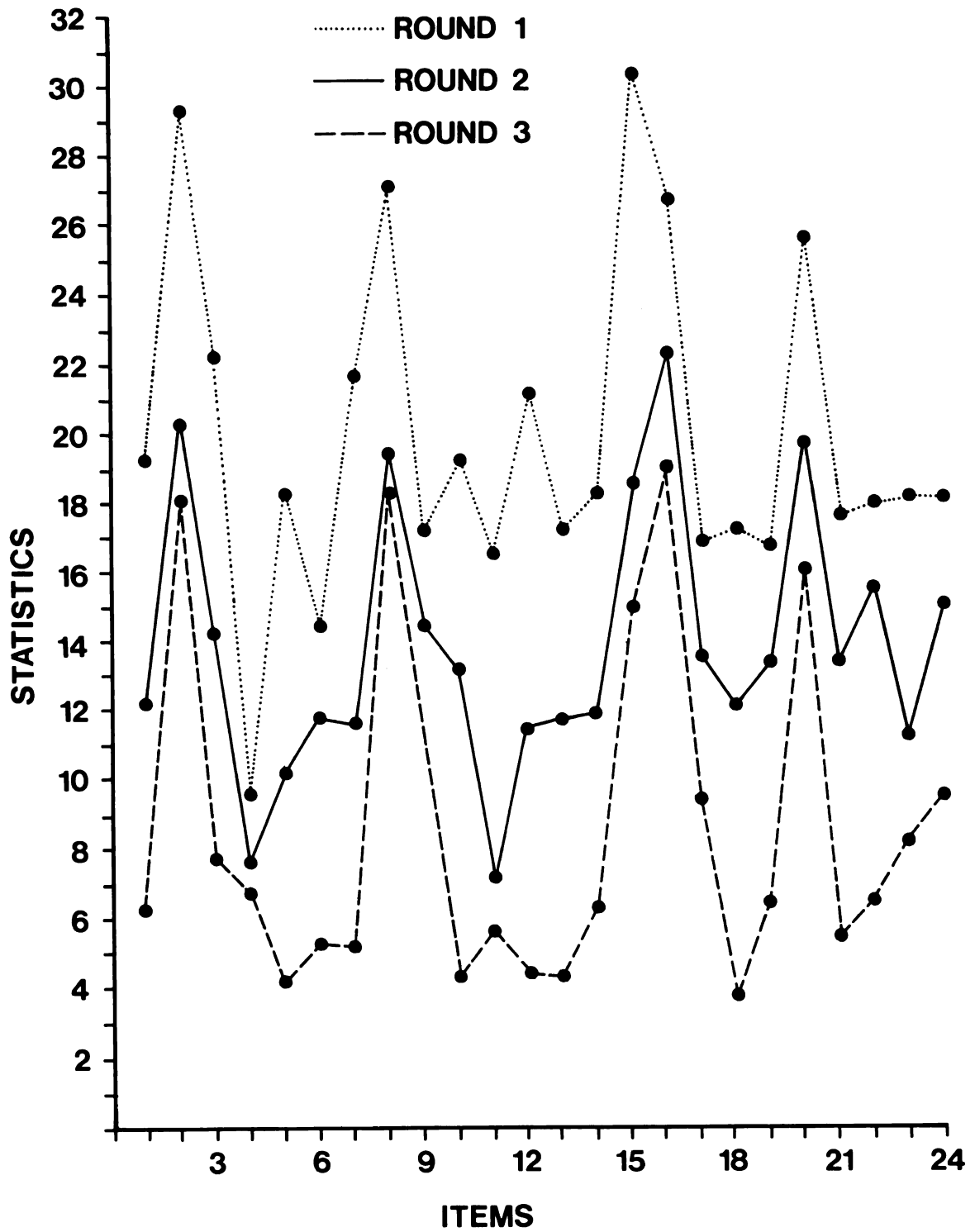


FIGURE 3.—Convergence to Consensus, Part 3: Content Topics, Formal

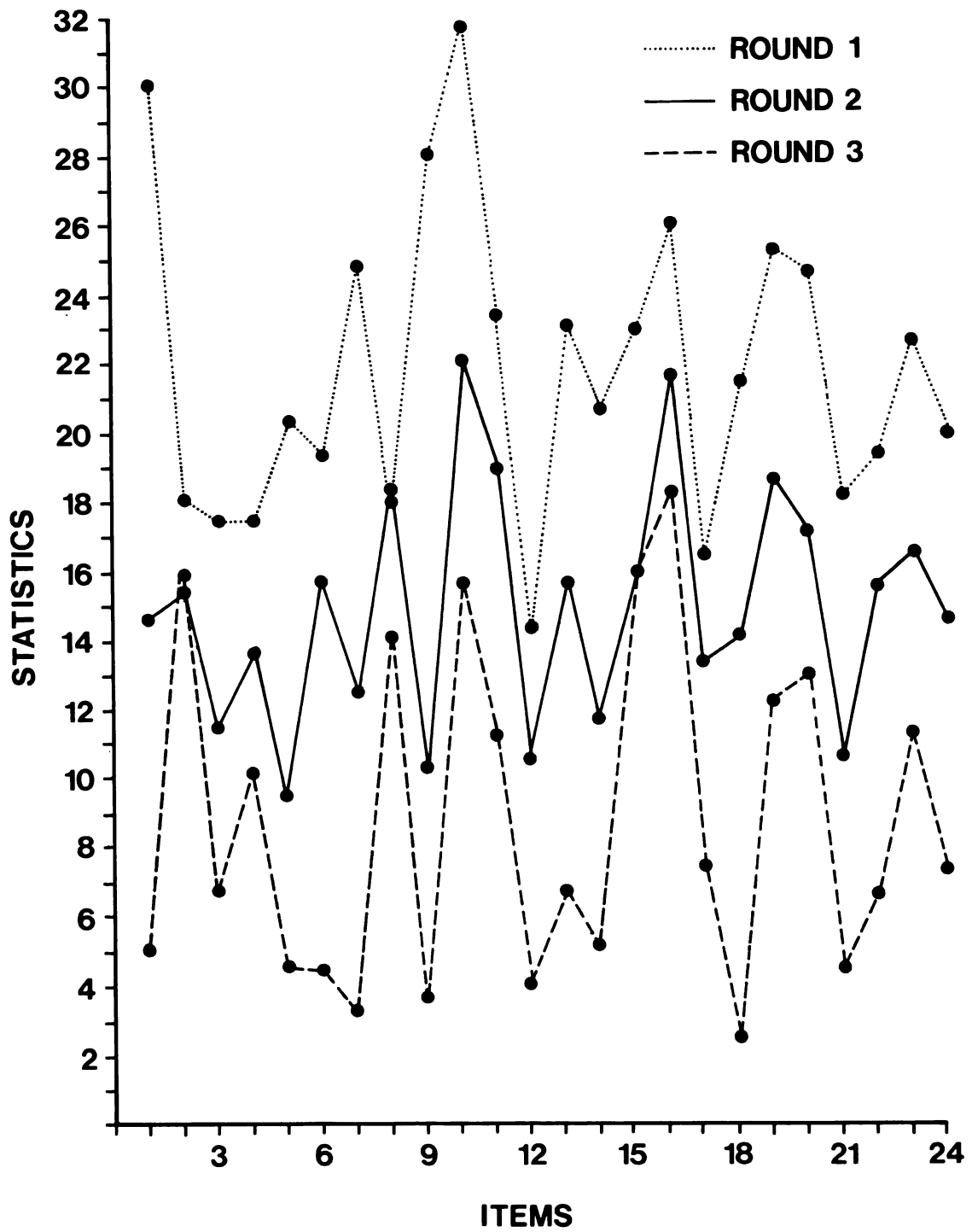


FIGURE 4.—Convergence to Consensus. Part 3: Content Topics. Non Normal

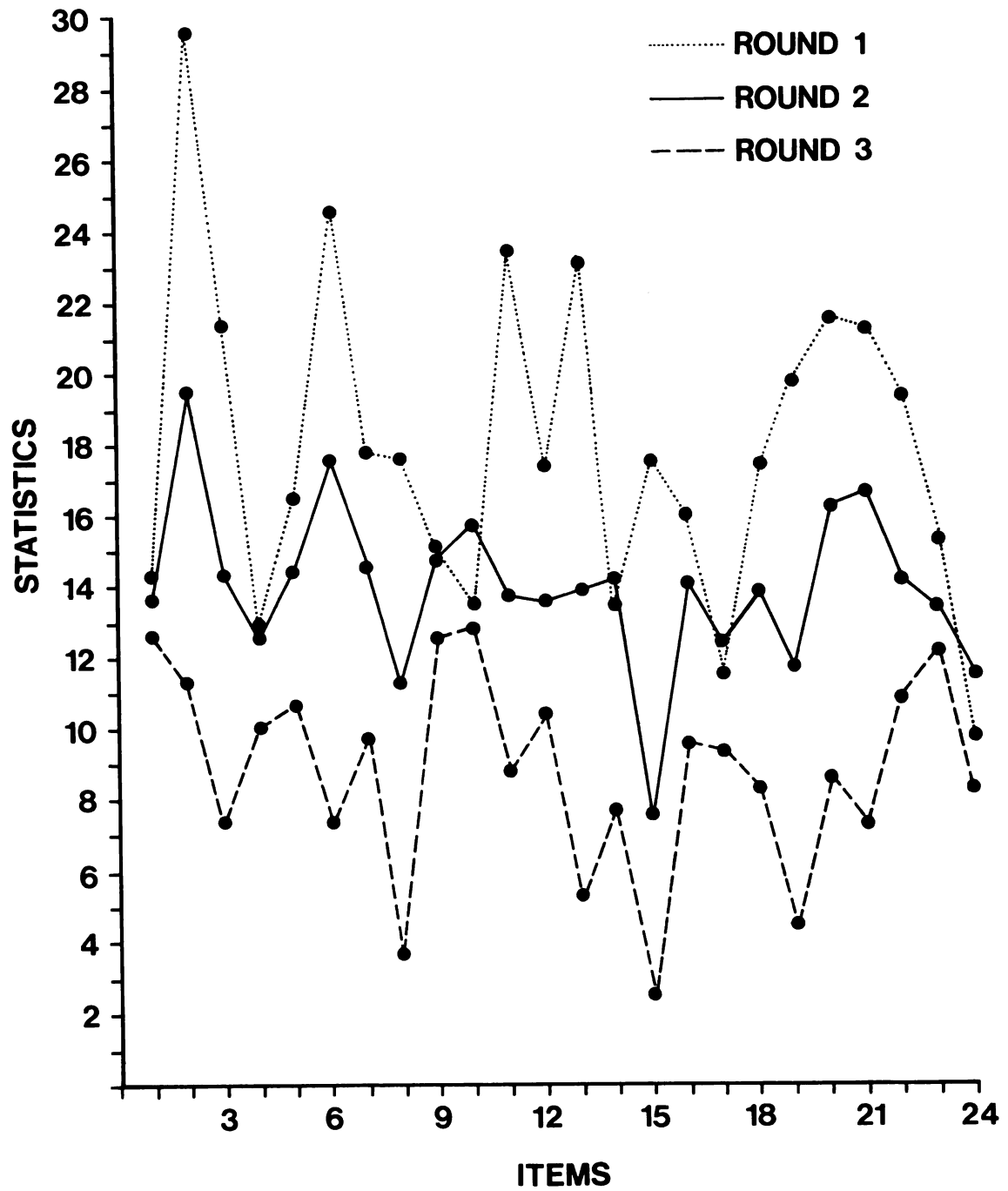


FIGURE 5.--Convergence to Consensus. Part 3: Content Topics, Informal

1 and 2. The rate of convergence for 24 informal items was 20 (83.3%) between rounds 1 and 2, and 24 (100%) between rounds 2 and 3.

Summary of question 3.2: The rate of convergence to consensus varied from 100% for content topics in formal systems to 83.3% for informal systems between rounds 1 and 2. Between rounds 2 and 3 the rate of convergence to consensus was 100% for both formal and informal systems, and 91.7% for non-formal systems. The items in which convergence did not occur were: death and dying, censorship, and hobbies in non-formal systems, and family goals and objectives, and growth and awareness in informal systems.

Experiment to Test Convergence to Consensus

Three items, related to communications were selected to submit to a 2x3x3 analysis of variance with two groups, specialist and generalist, as independent variables; three sections, hierarchical, heterogeneous, and homogeneous as independent variables; and item scores from rounds 1, 2, and 3 as repeated measures. The items selected were the objective labelled communicate, the course grouping: communications, and the content topic: communication skills. The two latter items had significant differences in prior analyses in this study. A summary of results was in table 9.

For the objective labelled communicate, interaction between groups and sections was significant at 0.03 and main effects due to rounds was shown. This test had potential for study of the process of convergence of opinion. Further study, might show a relationship between the process of convergence of opinion to the process of convergence in evaluation of the effect of the learning system.

No significant differences were shown for communications as a course grouping.

There was interaction between groups and sections for communication skills as a content topic in formal systems.

TABLE 9.--Significant Differences of Groups and Sections with Rounds as Repeated Measures on Communication Items

Item	Significant Source	DF	F _{obs.}	Prob.
Communicate	Between Groups & Sections	2	3.81	0.031
	Within Rounds	2	4.76	0.011
Communications	None	...	...	...
Communication Skills	Between Groups & Sections	2	5.56	0.007

2x3x3 Analysis of Variance, University of Alberta
Significance level 0.05

Summary: These results tended to support consensus, but further study of simple effects, controlling for groups and sections could be carried out.

Discussion: This study supported findings reported in the review of literature. It was possible to arrive at complete convergence to consensus about objectives, and content topics taught in formal and informal systems. There was some doubt about course groupings and content topics taught in non-formal systems, but the lowest convergence reported for these areas was 91.7%.

This study also tended to support the trend observed in the

Delphi studies of Sweigert-Schabaker, Lee, and Brooks¹ to require only two rounds. In this study convergence to consensus was complete for objectives and content topics taught in formal systems between rounds 1 and 2, and low 83.3% for content topics taught in informal systems.

Summary of Convergence to Consensus: Complete convergence to consensus was achieved as early as round two for items concerning objectives and content topics taught in formal systems, for a program in family studies, and by round three for content topics in informal systems.

Rating of Formal, Non-Formal, and Informal Learning Systems

Question 4: What is the rating for importance of content topics in a program of family studies, in a formal, non-formal, and informal learning system?

The means for each item in part 3: content topics, derived from round three Delphi questionnaire were rank ordered. The means are in table 24.

According to the terms of this study, a rating of 3 was important, and a rating of 4 was very important. There were no means of 4.0. Means for 20 (60.6%) items, important in informal systems were ranked at 3.0 or above. Eleven (33.3%) items to be taught in formal systems had means higher than 3.0. There were 8 (24.2%) items rated at 3.0 or higher to be taught in non-formal systems.

Few items were ranked unimportant (below 2.0). There were 3 (9.01%) in formal, 1 (3.03%) in non-formal, and none for informal systems.

¹Sweigert-Schabaker, "Delphi Technique", ED091415; Lee "Future of Home Economics"; Brooks, "Nor Cal Vocational Study", ED069276.

The following content topics were important for all three learning systems: communication skills, conflict resolution, decision making, interpersonal relationships, living with stress, parent education, and values.

Content topics important only in the informal system included: care of children, death and dying, hobbies, homemaking, marriage preparation, maturation, sexuality, and teaching children about sex.

Important in both informal and formal systems were content topics: family objectives and goals, family planning, growth and awareness, and understanding emotions.

The content topic, coping, was important in informal and non-formal systems.

Unimportant content topics for the formal system included: censorship, hobbies, and sexual therapy. In non-formal systems unimportant content topics were censorship and the use of television and radio.

The means for each item were compared across the formal, non-formal, and informal systems. The system with the highest mean was considered first priority, and the system with the lowest mean was considered third priority. Table 10, shows the resulting ranking of topics, and indicates 26 first rankings for importance in informal systems, and 4 for each of formal and informal systems. Second place ratings were 14 in formal, 11 for non-formal, and 6 for informal systems. Third place ratings were 18 for non-formal, 15 for formal, and 1 for informal systems.

TABLE 10.--Priority Ranking of Content Topics in Formal, Non-Formal, and Informal Systems

Description	Formal	Non-formal	Informal
Care of Children	2	3	1
Censorship	3	2	1
Civil Rights	3	1	2
Communication Skills	1	3	2
Conflict Resolution	2	3	1
Contemporary Society	2	1	3
Coping	3	2	1
Death and Dying	3	2	1
Decision Making	3	2	1
Family Goals & Objectives	2	3	1
Family Life Cycle	1	3	2
Family Planning	2	3	1
Gerontology	1	3	2
Growth & Self Awareness	2	3	1
Hobbies	3	2	1
Homemaking	3	2	1
Interpersonal Relationships	2	3	1
Living with Stress	2	3	1
Maturation	2	3	1
Middle Age	3	2	1
Parent Education	3	1	1
Sexuality	2	3	1
Teaching Children about Sex	2	3	1
Values	2	3	1
*Civic Responsibilities	3	2	1
*Community Support Groups	3	1	2
*Family Breakdown	1	3	2
*Marriage Preparation	2	3	1
*Sexism	2	3	1
*Sexual Therapy	3	2	1
*Understanding Emotions	3	2	1
*Use of Television & Radio			
In Home	3	3	1
*World Citizenship	3	2	1

*Additional items supplied by panelists

Summary of question 4: Informal, formal, and non-formal learning systems were rated in that order, for importance in teaching content topics.

EVALUATION

This section included: (1) discussion of evaluation of the Delphi method by panelists, (2) evaluation by the advisory committee of the objectives and course groupings.

Evaluation of Delphi Method

In this section, data from the evaluation section of the round three Delphi questionnaire were analyzed. The questions were classified as (1) time to answer, (2) comments, (3) evaluation, (4) influences on decision, (5) Delphi panels as advisory committees.

Time to Answer

The time required to answer the questionnaire was recorded for each round. Table 11, listed the results. Inspection of table 11 showed that in round 1 the majority¹ completed the questionnaire in 1 hour or less. The time increased to at least 2 hours for the majority in round 2, when feedback accompanied the questionnaire and panelists completed two copies. Time decreased to under 2 hours for round 3.

Comments

Provision was made for comments in rounds 1 and 2 but not in round 3. From table 12, it was evident that panelists liked to comment

¹A majority was a total of more than 50% on two or three adjoining categories.

TABLE 11.--Time Required to Answer Questionnaires

Time	Round 1		Round 2		Round 3	
	No.	Frequency	No.	Frequency	No.	Frequency
Under 15 minutes	11	11.8	2	2.3	4	3.2
16 to 30 minutes	41	44.1	11	12.8	22	23.7
31 to 60 minutes	28	30.1	30	34.9	40	43.0
1 to 2 hours	7	7.5	22	25.6	22	23.6
Over 2 hours	4	4.3	18	20.9	5	5.4
Missing	2	2.2	3	3.5	1	1.1
Total	93	100.0	86	100.0	93	100.0

Relative frequency (percent) SPSS

TABLE 12.--Comments Supplied by Panelists

Comments	Round 1		Round 2		Round 3	
	No.	Frequency	No.	Frequency	No.	Frequency
Supplied	47	50.5	67	77.9	42	45.2
Not supplied	46	49.5	18	20.9	50	53.7
Missing	0	0	1	1.2	1	1.1
Total	93	100.00	86	100.00	93	100.0

Relative frequency (percent) SPSS

as, 67 (77.9%) commented in round 2, and although comments were not required, 42 (45.2%) panelists commented in round 3.

Evaluation

Results from the question evaluating effectiveness of the Delphi method, were in table 13. Inspection of table 13 showed that the majority of panelists (78.2%) were effectively influenced by feedback. Only 4.3% were not affected by feedback.

The Delphi study was effective in adding to the knowledge of 48.4% of the panelists. Only 3.2% reported not effective.

TABLE 13.--Evaluation of Delphi Method

Description	Very Effective	Effective	Slightly Effective	Not Effective
Influence of feedback	13.0	65.2	17.4	4.3
Added to knowledge of panelists	7.5	48.4	40.9	3.2
Frustrated panelists	6.5	25.0	48.9	19.6
Felt rushed for time	14.0	33.3	30.1	22.6
Felt pressured to conform	7.5	26.9	39.8	25.8
Interesting	28.3	55.4	9.8	6.5
Gave opportunity to communicate	13.0	48.9	31.5	6.5
Time consuming (more than committee)	7.5	19.4	47.3	25.8
Thought provoking	31.2	51.6	14.0	3.2

Adjusted frequency (percent) SPSS
Total 93 panelists

The rating for effectiveness in frustrating the panelists indicated that the majority were not frustrated by the method. Slightly under half (47.3%) of the panelists felt rushed for time. The majority of panelists did not feel pressured to conform. This was inconsistent with the effect of feedback reported earlier. The Delphi method was found interesting by 55.4% or more of the panelists. Only 6.5% reported not interested by the method. The majority thought Delphi method gave an opportunity to communicate.

In reply to the question comparing Delphi method with committee meetings as to the time consumed, the panelists rated 47.3% slightly effective, and 25.8% not effective. This was interpreted to mean that 63.1% found the Delphi method less time consuming than committee meetings.

Panelists found the Delphi method thought provoking, with ratings of 51.6% effective, and 31.2% very effective.

Influences on Decision

The influences on panelists decisions were rank ordered as shown in table 14. The belief that home economics has a wider meaning than food preparation and clothing influenced the greatest number, 84 (90.4%) of the panelists. The opposing notion, that home economics is concerned with food preparation and clothing, only, had the least influence, on 3 (3.2%) of the panelists.

Knowledge of family needs also influenced 84 (90.3%) of the panelists. The belief that family studies could be a part of a college of home economics was held by 81 (87.1%) of the panelists. The possible effect on society was considered by 74 (79.6%) of the panelists.

TABLE 14.--Rank Order of Influences on Decision

Influence	No.	%
Belief that home economics has a wider meaning than food preparation and clothing	84	90.3
Knowledge of family needs	84	90.3
Belief that family studies can be a part of a college of home economics	81	87.1
Possible effect on society	74	79.6
Personal experience with university	68	73.1
Probable outcome of a four year baccalaureate in family studies	53	57.0
Opinion of other panelists as shown in feedback	52	55.9
Happiness of undergraduate in a four year family studies program	20	21.5
Belief that family studies means the same as home economics	14	15.1
Belief that family studies means the same as sociology and/or social work	11	11.8
Consideration of cost to implement such a program	5	5.4
Notion that home economics is concerned with food preparation and clothing only	3	3.2

Personal experience with university influenced 68 (73.1%). The probable outcome of a four year baccalaureate in family studies was considered by 53 (57%) of the panelists. The opinion of other persons, as shown in feedback, affected 52 (55.9%).

Other items had less influence. Happiness of the undergraduate was considered by only 20 (21.5%). The belief that family studies means the same as home economics influenced 14 (15.1%). The belief that family studies means the same as sociology and social work influenced 11 (11.8%). Only 5 (5.4%) of the panelists considered the cost to implement a program in family studies.

A Delphi Panel as an Advisory Committee

In reply to the question: "Could a Delphi study, on a continuing basis, assume the role of an advisory committee to a college?" there were 55 (59.1%) affirmative replies, and 27 (29.1%) negative replies. Eleven (11.8%) panelists did not respond.

Summary of evaluation of Delphi method: Time to answer the questionnaire varied from less than an hour for round 1, to at least two hours for round 2. Panelists made comments, when not required in round 3 at a rate of 45.2%, and at a rate of 77.9% when required in round 2.

Panelists in the population of this study were influenced by feedback, but did not feel pressured to conform. Greatest influence was from the belief that home economics has a wider meaning than food preparation and clothing, and knowledge of family needs. The belief that family studies means the same as home economics received only

3 (3.3%) higher rating than the belief that home economics means the same as social work.

Panelists found the Delphi method interesting, thought provoking and the method added to their knowledge.

The opportunity to communicate given by the Delphi method, was less time consuming than a committee meeting. A majority recommended the use of a Delphi study on a continuing basis in the role of an advisory committee.

Evaluation by Advisory Committee

The advisory committee was asked three questions. The first was to accept or reject the proposed objectives and course groupings. The replies are listed in table 15. Unqualified support was given by 4 (26.7%) members. The framework was accepted, with comments, by 9 (60.0%) members. Rejection, with comments, was given by 2 (13.3%) members. The comments are included later under advantages and disadvantages.

The advisory committee was asked to state when such a program would be probable. The estimates are indicated in table 16. It should be noted that 5 (33.3%) did not predict. Such forecasting was the basis for early Delphi studies. However, 9 (60.0%) of the advisory committee did make comments to contribute to policy. This may reflect a change in the use of the Delphi method from projecting to policy making.

TABLE 15.--Evaluation of Objectives and Course Groupings by Advisory Committee

Category	Response	
	No.	%
Acceptable	4	26.7
Acceptable, with comments	9	60.0
Rejected	2	13.3
Total	15	100.0

TABLE 16.--Advisory Committee Forecast of Probable Implementation of Program

Category	Response	
	No.	%
Start 1977, Complete 1980	3	20.0
Start 1978, Complete 1982	4	26.7
Start 1980, Complete 1985	3	20.0
No Answer	5	33.3
Total	15	100.0

The advisory committee comments were summarized under the headings: suggestions for implementation, recommended change in the models, advantages and disadvantages of the program.

Suggestions for implementation included a description of curriculum development: universities required a minimum of four years to complete implementation of a new program. At least one year was spent preparing and adopting the proposal. This required approval by the faculty and other official bodies. Budgets must be considered and expertise of faculty members and schedules. If the program used already existing classes, curriculum development would be faster, and the new first year program might be adopted and started in the same year. One year was allotted to the development of each year in the program.

Thought should be given to persons already working in the family area, who required further knowledge. New courses could be offered first at summer school.

Contact should be made with the College of Education to develop a degree program for family life teachers in Divisions I to IV.

Recommended changes for the models, included the following: the objectives might be clarified, for example, phrases such as public relations. Course groupings were too extensive. More stress on social science and less on natural science was recommended by four members. Deletion of physics was recommended by six members. Chemistry and environmental ecology were questioned. Courses to be added included aesthetics, economics, media training, sexuality, sociology and field work, and methods appropriate to the occupation. Clarification of the three factors entitled elective was requested. Classes

from the College of Commerce could be included as electives.

Advantages of the program were set out. The relationships in objectives were clearly drawn, and should strengthen the institution of the family. Each component had appeal to certain members. The course groupings gave a unique blend of social sciences and natural sciences. The classes suggested are already in existence.

Disadvantages were pointed out. The objectives have value in the formal teaching setting but do not provide practical contributions for the community. Therefore, opportunities for jobs may be limited. The course groupings stress natural science too much and core is extensive. Courses should be more specifically related to the objectives, weighted and planned to fit a four year program.

The above comments were made by the advisory committee specifically for the province of Saskatchewan.

Summary

From the examination of the findings it was evident that the Delphi method was suitable to develop objectives and experiences for a program in family studies. The high ranking of content topics in the informal system had implications for persons who consider the home a learning center.

It appeared that the Delphi method required further study if used to make policy. The generalist heterogeneous section, representative of persons in post-industrial society showed differences. Consensus was complete for the majority of the items in this study.

CHAPTER 5

SUMMARY, CONCLUSIONS, IMPLICATIONS

SUMMARY

The purposes of this study were (1) to identify objectives and course groupings for a program in family studies at the college level, (2) to determine appropriate content topics for family studies in formal, non-formal, and informal education systems, (3) to contribute to the theory of Delphi method by comparing panels that have hierarchical, heterogeneous, and homogeneous sections, within specialist and generalist groups.

A fifteen member advisory committee, including administrators and members experienced in family studies, curriculum development, and Delphi studies, was used to pilot test the questionnaires and evaluate the objectives. There were six Delphi panels, drawn at random from appropriate organizations in Saskatchewan, in a combination of two groups: specialists (trained in home economics/family studies) and generalists (other professionals working with families) and three sections: hierarchical (in formal learning systems), heterogeneous (in consulting roles), and homogeneous (married or retired to the home). The three round Delphi questionnaires were completed by 89.4%, 82.7%, and 89.4% panelists, respectively.

Round one Delphi questionnaire was derived from university calendars and the literature reviewed.

There were 123 items in three parts: part 1: objectives, part 2: course groupings, and part 3: content topics, all for a program in family studies in a college of home economics. The content topics were evaluated for importance in formal, non-formal, and informal learning systems. Panelists suggestions were added in round two, making an instrument of 169 items. Information and evaluation items were added in round three to total 216 items. The interval between rounds was 24 and 26 days. Panelists were telephoned one week after mailing, to check on arrival of the questionnaires.

A four point Likert-type scale, was used as a metric, permitting analysis of data using parametrics. Reports to panelists used a verbal report and traditional Delphi statistics: the median and interquartile range. Round three data were submitted to principal factor analysis with varimax rotation, to determine objectives and course groupings. Two-way analysis of variance and Newman-Keuls one-way analysis of variance were used to determine differences, among the means of groups and sections. The Uhl formula: $\frac{\text{sum of distance of individual mean from mean of all}}{\text{mean of all}}$, was used to show convergence to consensus. Three-way analysis of variance was used to test consensus in one item from each part. Rank order, according to means, was used to determine priorities in formal, non-formal, and informal learning systems.

CONCLUSIONS

This section was organized according to the purposes of the study and the evaluation data.

1. The Delphi method was suitable to determine three major objectives for a program in family studies at the college level. These three objectives were human development, communication, and integrative processes.

Use of the Delphi method produced six major course groupings for a program in family studies. These were a core of natural sciences and humanities, the family, home economics, methods, social sciences and special issues.

2. Informal, formal, and non-formal learning systems were rated, in that order, for importance in teaching content topics.

All three systems should teach: communication skills, conflict resolution, decision making, interpersonal relationships, living with stress, parent education and values.

Only the informal system should teach: care of children, death and dying, hobbies, homemaking, marriage preparation, maturation, sexuality, and teaching children about sex. None of the content topics were considered unimportant for this system.

Unimportant content topics for the formal system were: censorship, hobbies and sexual therapy. Censorship and the use of television and radio were unimportant for the non-formal system.

3. There were significant differences between the specialist and generalist groups, and the hierarchical, heterogeneous, and homogeneous sections. Convergence to consensus was achieved.

Concerning objectives, specialists favored inclusion of an objective to provide interdisciplinary study of family forms and did not favor an objective about advancement of intercultural relations. Generalists reversed these opinions.

Both hierarchical and homogeneous sections were close in opinion but the heterogeneous sections were not. Objectives questioned related to the environment, individual fulfillment, and values.

Controversial course groupings were communications, child development, design, and computer science. These differences existed between specialists and generalists in heterogeneous sections.

Care was required in selecting content topics. The generalist heterogeneous section was a part of all interaction except that for family planning in the non-formal system.

Differences in the formal system appeared for content topics: civil rights, communication skills, community support groups, contemporary society, death and dying, decision making, family breakdown, gerontology, interpersonal relationships, middle age, sexuality, and values.

Differences about topics to be taught non-formally centered on: civic responsibility, death and dying, family planning, gerontology, growth and awareness, middle age, and sexual therapy.

For the informal system there were differences for the topics: decision making, family planning, and homemaking.

There was 100% convergence to consensus on all items about objectives and content topics taught in formal systems, as early as round two. By round three convergence to consensus was 96.9% for

course groupings and 100% for content topics for the informal system and 91.7% for the non-formal system. Items on which opinion did not converge were chemistry; family goals and objectives and growth and awareness for informal; and death and dying, censorship, and hobbies in non-formal systems.

4. Panelists evaluated the Delphi method as interesting, and thought provoking. The method added to their knowledge.

Greatest influence was the belief that home economics had a wider meaning than food preparation and clothing, and knowledge of family needs. The belief that family studies means the same as home economics received only 3 (3.3%) higher rating than the belief that home economics means the same as social work. Although feedback influenced the panelists, they did not feel pressured to conform.

The opportunity to communicate given by the Delphi method was less time consuming than a committee meeting. A majority of the panelists recommended the use of a Delphi study, on a continuing basis in the role of an advisory committee.

IMPLICATIONS

The implications of this study were considered for (1) a program in family studies in a college of home economics (2) implementation of a program of family studies in formal, non-formal, and informal learning systems (3) the use of Delphi method (4) further research. The implications were based on data derived from the Delphi panelists and advisory committee members and from the review of literature.

Family Studies Program Development at the College Level

A definition of family studies in a college of home economics includes an understanding of human development, communication, and integrative processes to help individuals and families improve the management of food, shelter, textiles, and human relationships.

The human development component of a program in family studies focuses on the individual family member at different stages in the life cycle. The graduate in family studies will be able to help the individuals in a family to progress in the following areas of human development: health; creativity; aesthetic appreciation; decisions about the utilization of resources, goods, and services; skill in business operations; appreciation of needs, differing for age and sex, of family members; a clearer understanding of ethical and moral values; realization of the need to evaluate consequences before coming to a decision; the place of the individual in the community with respect to obligations and rights; all this to understand the pre-school child and later stages of the life cycle. If the graduate is unable to integrate the scientific knowledge from various disciplines, the understanding of family life and ability to help members of the family will be below standard.

The communication component of the program in family studies focuses on an understanding of communication between individuals in the family, and communication between the family and other societal structures to help the family and individual carry out responsibilities and obtain rights. The graduate in family studies will understand the communication process, and concentrate on communication about the management

of food, shelter, textiles, and human relationships. If the communication is not based upon a background knowledge of natural and social sciences, if the communication does not stress environmental conditions, and consider social changes, the graduate will not achieve a satisfactory role as a professional.

The integrative processes component refers to advancement of the graduates ability, as follows: to translate scientific knowledge into action; to integrate learnings from one course to another; to think critically about change and the diffusion of new ideas; to understand the legal process and how it can improve family life; to consider how to make an institutional setting and a home meet the needs of family members; and to integrate knowledge about the family and its environment, for presentation to the individual, the family, and the public.

The course groupings cluster in six areas: a core of social science and natural science to provide background; a component about the family and its processes; a component of home economics courses; and three groupings of electives. From one to three half classes, in a four year program, should be selected from each of these elective groupings, which are entitled: methods, additional social science, and special issues. Classes in the issues section would change as society changes.

Figure 6, shows a model of objectives for a program in family studies, and figure 7, a model for course groupings for a program in family studies, in a college of home economics, based on feedback from the panelists in the study.

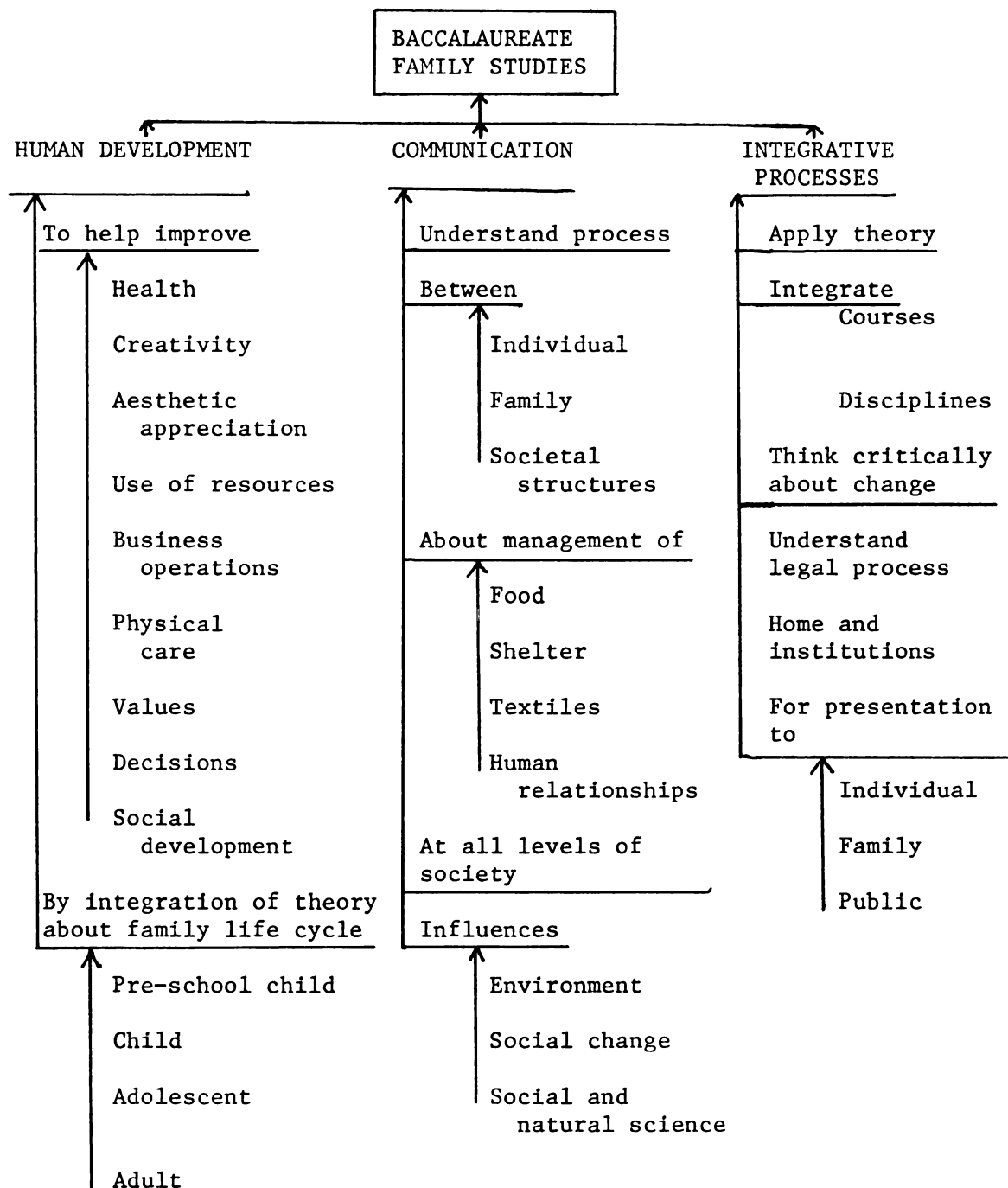


FIGURE 6.--A Model of Objectives for a Program of Family Studies in a College of Home Economics

Core

English or French
 Philosophy or Comparative Religion
 Psychology - Human Development
 Environmental Ecology (Prerequisite - 2 of)
 Physiology Biology
 Chemistry
 Physics

The Family

Family Management
 Family Finance
 Family Development
 Child Development
 Communication
 Family Law

Home Economics

Design (Prerequisite)
 Textiles
 Housing Economics
 Clothing Sociology
 Nutrition

Electives (Select 1 to 3 from each group)Methods

Computer Science
 Counselling
 Social Work
 Food Management
 Community Services
 Agriculture

Additional Social Science

Anthropology
 Sociology Societal Issues
 Nontraditional
 Families
 International Relations
 Psychology

To distinguish from
 consumer studies
 program

Issues

Community Develop-
 ment
 Medicine (Health)
 Women's Studies
 Food

Select 1 only or
 interdisciplinary
 class

FIGURE 7.--A Model of Course Groupings in a Four Year Program in Family Studies in a College of Home Economics.

If graduates were to be evaluated with sociologists, social workers, and medical workers, in the field,¹ they must have a unique contribution to make, such as the objectives and course groupings of this study provided. The course work suggested in this study goes beyond the preparation of a sex educator described by Fohlin² and is broader than the child development program delineated by Frasier.³

Schvaneveldt criticized family studies as a broad field without specific boundaries, not having a clear image.⁴ This study attempted to draw parameters, separating the family studies / home economics background from the social science background of the sociologist and social worker by including some natural science. A comparison of the objectives and course groupings recommended in this study, with those projected by Ellen Swallow Richards, indicated core subject of this study were also recommended by the "woman who founded ecology". Ellen Swallow Richards envisioned integration of people, perception, and environment through a study of the sciences and arts of eugenics, ecology, and environment.

¹Leland Axelson, "Promise or Illusion: The Future of Family Studies." Family Coordinator 24 (January 1975), p. 3.

²Mary Fohlin, "Selection and Training of Teachers For Life Education Programs", Family Coordinator 20 (July 1971), p. 233.

³Roberta C. Frasier, "Meeting the Problems of Today's Families Through Extension Programs", Family Coordinator 20 (October 1971), p. 338.

⁴Joy Schvaneveldt, "Role Problems of the College Family Life Educator and Researcher", Family Coordinator 20 (January 1971), p. 9.

An implication of this study was that the objectives of Ellen Swallow Richards, which have yet to be fulfilled, would become real, and a part of "Human Ecology, the study of surroundings of human beings, in the effects they produce on lives".¹ This study also implied that it is necessary to search the past to build the future.

Implementation of a Program in Family Studies in Formal, Non-formal, and Informal Systems

A plan of implementation for a program in family studies, in a formal system is drawn from suggestions of the advisory committee, and the review of literature.²

- (1) Define the role of the program. (L³)
- (2) Identify knowledge and skill requirements, by conducting a task analysis. (L⁴)
- (3) Discuss with individual faculty of the college involved. (L⁵)
- (4) Conduct operations research to determine values and costs. (L⁶)
- (5) Prepare presentation for approval of faculty. (A)

¹Ibid., p. 215.

²The symbol following steps in the process means: L from the review of literature; A from the advisory committee evaluation.

³Rouse, Howes, and Gustafson, "Role Based Curriculum", pp. 13-23.

⁴Davis, Alexander, and Yelon, Learning Systems Design, pp. 182-195.

⁵Rowse, Howes, and Gustafson, "Role Based Curriculum", pp. 13-23.

⁶Page, Jarjoura, and Konopka, "Curriculum Design", pp. 31-49.

(6) Study schedules and contact faculty in other colleges to service and be serviced by the program. (A)

(7) Seek approval of official bodies. (A)

(8) Prepare for a pilot study by recruiting students and possible employers. (L¹)

(9) Plan and progress through four years using existing courses, adding one or two new courses a year, based on the content topics for formal learning systems of the study. (A)

(10) Evaluate the pilot study. (L²)

The plan described above implied action research on the part of a college of home economics, focusing on: operations research to determine cost and value, scheduling, counselling to recruit students, search for job opportunities, and evaluation.

In addition to implementation through the formal learning system, the section of the study on content topics to be taught in formal, non-formal, and informal learning systems provided a base, not only for university courses, but for seminars offered at professional meetings, and through media into the home.

¹Clyde McDaniels, "Toward a Professional Definition of Marriage Counselling", Family Coordinator 20 (January 1971), p. 32.

²Rowse, Howes, and Gustafson, "Role Based Curriculum", pp. 13-23.

Delphi Methodology

The characteristics of groups to be used to determine policy were of interest to administrators and legislators. If no significant differences appeared, selection from the public is appropriate. The population for this study did show some differences. Further research should be conducted.

Operations research could be used to compare the value and cost of Delphi studies and committee meetings. The personality of individual panelists or committee members may influence success of both.

Further Research

Several topics that require a search of literature, action research, or theory construction were evident.

- (1) Replicate the study using different panels. Students, medical personnel, urban and rural residents might be included.
- (2) Study hierarchical, heterogeneous, and homogeneous Delphi panels in other professional areas such as medical, and legal, and in manufacturing.
- (3) Use a university curriculum in family studies as a base for operations research, evaluating costs and benefits, in Saskatchewan.
- (4) Conduct further research with those items showing significant differences and with other formula to test the process of convergence to consensus.
- (5) Analyse the personality and attitudes of Delphi panelists.

- (6) Develop methods of presentation suitable to non-formal and informal learning systems for content topics about family studies. Develop evaluation strategies for these methods.
- (7) Survey potential employers of graduates. Develop task analysis for competencies required by graduate and means of publicity to secure career opportunities.
- (8) Determine suitability of content topics in family studies for different age levels of students.
- (9) Study the problem of heterogeneity in post industrial society.
- (10) Use the Delphi method to determine the goals of the family institution. Burks studied the future of this institution.¹ Suggestions for panels could replicate her study, or panels representative of the stage in the family life cycle, alternative life styles or ethnic groups could be used.

¹Jayne Burress Burks. "A Study of the Application of Delphi Technique to the Future of a Social Institution". (Ph. D. Dissertation; Saint Louis University), 1973.

APPENDICES

APPENDIX A

LISTS OF SOURCES

APPENDIX A
LIST OF SOURCES

TABLE 17.--Sources for Delphi Panelists

Section	Source	Number Drawn
Specialist		75
Hierarchical		27
Deans and Director	- Canadian University Teachers of Home Economics	5
External family life faculty	- Ibid.	5
Internal faculty	- College of Home Economics at University of Saskatchewan	5
Extension	- Canadian Home Economics Association	4
Family Life	- Department of Education	4
Home Economics (high school)	- Saskatchewan Teachers Federation	4
Heterogeneous	- Saskatchewan Home Economics Association (excluding teachers and those with no indication of work)	25
Homogeneous	- University of Saskatchewan Alumnae (Home Economics)	23
Generalist		69
Hierarchical		24
Superintendents	- Department of Education	5
Principals	- Board of Education of the Saskatoon School District No. 13	5
High School	- Ibid.	5
Elementary School	- Ibid.	5
Catholic	- Board of Education for Saskatoon Catholic Schools	4

TABLE 17.--Continued

Section	Source	Number Drawn
Heterogeneous	- Credit Granters Association	22
	- Department of Social Service (Saskatoon Region)	
	- Department of Youth and Culture (Saskatoon Region)	
	- Saskatoon Council of Churches	
	- Saskatoon Public Library	
	- yellow pages of telephone directory for Moose Jaw, Prince Albert, Regina, Saskatoon (architects, associations, church organizations, clubs, day nurseries, financing, investment, lawyers, physicians, social service organizations)	
Homogeneous	- University of Saskatchewan Alumnae (female, married, resident in Saskatchewan)	23

TABLE 18.--Sources for Items in Round One Questionnaire

Part 1: Objectives

Item	Author	Book/Periodical	Page
101	University of North Dakota	"Departmental Goals"	8
102	University of Guelph	<u>Calendar</u>	36
103	Chandler, Barbara	"The White House Conference on Children," <u>Family Coordinator</u>	201
104	Baird, J; D. Keenan	<u>Family Life Education Re-examined</u>	28
105	Novak, Michael	"The Family Out of Favor," Harpers	37
106	University of Manitoba	<u>Calendar</u>	313
107	Cromwell, R. E.; Thomas, V. L.	"Developing Resources for Family Potential," <u>Family Coordinator</u>	15
108	Family Life Saskatchewan	<u>Annual Report</u>	Appendix A
109	University of Alberta	<u>Calendar</u>	9.12
110	Goodwin, R. H.	"The Family Life Educator as Change Agent," <u>Family Coordinator</u>	343
111	University of Toronto	"Report to Provost"	2
112	Brescia College	<u>Calendar</u>	7
113	North Dakota State University	<u>Bulletin</u>	61

TABLE 18.--Continued

Part 1: Continued

Item	Author	Book/Periodical	Page
114	Frasier, R. C.	"Meeting Problems of Today's Families Through Extension Programs," <u>Family Coordinator</u>	337
115	Goldberg, R. L.; Goldberg S.	"Role of Learning Center," <u>Family Coordinator</u>	293
116	Green, Kinsey	<u>Family Life Education: Focus on Student Involvement</u>	24
117	Acadia University	<u>Calendar</u>	117
118	University of Guelph	<u>Academic Brief</u>	35

128

TABLE 27.--Continued

Part 2: Course Groupings

Item	Author	Book/Periodical	Page
201	Carrera, Michael	"Preparation of A Sex Educator," <u>Family Coordinator</u>	105
202	University of Saskatchewan	<u>Calendar</u>	233
203	University of Alberta	<u>Calendar</u>	931.1
204	O'Neill, N.; O'Neill G.	"Open Marriage: Implications for Human Sexual Systems," <u>Family Coordinator</u>	451

TABLE 18.--Continued

Part 2: Continued

Item	Author	Book/Periodical	Page
205	University of Manitoba	<u>Calendar</u>	314
206	University of Saskatchewan	<u>Calendar</u>	233
207	National Council on Family Relations	"Family Life and Sex Education: Proposal Criteria for Teacher Education," <u>Family Coordinator</u>	185
208	University of Toronto	"Report to Provost"	7
209	University of Alberta	<u>Calendar</u>	931.1
210	University of Guelph	<u>Academic Brief</u>	39
211	University of Saskatchewan	<u>Calendar</u>	233
212	University of Toronto	"Report to Provost"	7
213	Duvall, Evelyn	"Family Development Application," <u>Family Coordinator</u>	332
214	Churaman, C. V.	"Home Management for Content of Family Studies," <u>Family Coordinator</u>	133
215	Prime, B. (ed.)	"The Future of the Family," <u>Transition</u>	693
216	University of Alberta	<u>Calendar</u>	931.1
217	Rice, V. M.	"A. V. S. Department of Marriage and the Family," <u>Journal of Home Economics</u>	693

TABLE 18.--Continued

Part 2: Continued

Item	Author	Book/Periodical	Page
218	Axelson, Leland	"Promise or Illusion: The Future of Family Studies," <u>Family Coordinator</u>	3
219	Broderick, Carlfred	Editorial, <u>Journal of Marriage and Family</u>	401
220	Kerckhoff, R. T.; Hancock, T. W.	"The Family Life Educator of the Future," <u>Family Coordinator</u>	318
221	University of Manitoba	<u>Calendar</u>	315
222	Carrera, Michael	"Preparation of a Sex Educator," <u>Family Coordinator</u>	103
223	Baird, J.; Keenan, D.	<u>Family Life Education Re-examined</u>	24
224	University of Saskatchewan	<u>Calendar</u>	233
225	Fohlin, M. B.	"Selection and Training of Teachers for Family Life Education," <u>Family Coordinator</u>	237
226	Axelson, Leland	"Promise or Illusion: The Future of Family Studies," <u>Family Coordinator</u>	3
227	Family Life Saskatchewan	<u>Annual Report</u>	Appendix A
228	Broderick, Carlfred	Editorial, <u>Journal of Marriage and Family</u>	401

TABLE 18.--Continued

Part 2: Continued

Item	Author	Book/Periodical	Page
229	Fohlin, M. B.	"Selection and Training of Teachers for Family Life Education," <u>Family Coordinator</u>	237
230	Family Life Education Committee	<u>Report to Minister</u>	28
231	University of Toronto	"Report to Provost"	5
232	University of Alberta	<u>Calendar</u>	931.1
233	Young	"Content Analysis"	24K

131

TABLE 27.--Continued

Part 3: Content Topics

Item	Author	Book/Periodical	Page
301	Citizen's Inquiry	<u>Report</u>	20
302	Family Life Education Committee	<u>Report to Minister</u>	28
303	Ibid.	...	28
304	Kischuk, M.	<u>Implications for Family Life Education in Saskatchewan</u>	10

TABLE 18.--Continued

Part 3: Continued

Item	Author	Book/Periodical	Page
305	Family Life Education Committee	<u>Report to Minister</u>	12
306	Ibid.	...	28
307	Levin, E.	"Development of Family Life Programs," <u>Family Coordinator</u>	344
308	Family Planning Committee	<u>Report to Minister</u>	14
309	Spoon, D.; Southwick, J.	"Promoting Mental Health Through Family Life Education," <u>Family Coordinator</u>	281
310	Family Life Education Committee	<u>Report to Minister</u>	15
311	Duvall, Evelyn	"Family Life Applications," <u>Family Coordinator</u>	332
312	Family Planning Committee	<u>Report to Minister</u>	14
313	National Council on Family Relations	"Family Life and Sex Education: Proposed Criteria for Teacher Education," <u>Family Coordinator</u>	185
314	Editor	"Sex Education," Education	214
315	Family Life Education Committee	<u>Report to Minister</u>	12

TABLE 18.--Continued

Part 3: Continued

Item	Author	Book/Periodical	Page
316	Citizen's Inquiry	<u>Report</u>	20
317	Schvaneveldt, J. D.	"Role Problems of Family Life Educators," <u>Family Coordinator</u>	4
318	Kischuk, M.	<u>Implications in Family Life Education</u> <u>in Saskatchewan</u>	3
319	Family Planning Committee	<u>Report to Minister</u>	14
320	National Council on Family Relations	"Family Life and Sex Education: Proposed Criteria in Teacher Education," <u>Family Coordinator</u>	105
321	Family Life Saskatchewan	<u>Annual Report</u>	Appendix A
322	Family Planning Committee	<u>Report to Minister</u>	14
323	Carrera, Michael	"Preparation of a Sex Educator," <u>Family Coordinator</u>	103
324	Family Life Saskatchewan	<u>Annual Report</u>	Appendix A

APPENDIX B

INVITATION AND REPLY SHEET



UNIVERSITY OF SASKATCHEWAN

COLLEGE OF HOME ECONOMICS

SASKATOON, CANADA
S7N 0W0

April 25, 1976

I am writing to ask your help in a study that I am making for my dissertation for the Doctor of Philosophy degree in Family Ecology at Michigan State University. Dr. Norma Bobbitt is the chairman of my committee. The study is approved by President R.W. Begg of the University of Saskatchewan.

The purpose of the study is to contribute to the theory of Futures Research, specifically the Delphi method, which is used to determine policy by seeking the opinion of experts, anonymously. Experts may be specialists or generalists. In this case, the policy is related to the development of a program in Family Studies in a College of Home Economics to prepare professionals who work with families and their environment, as teachers and consultants, in formal, non-formal and informal situations.

You have been approached because you are trained in home economics or family studies and work professionally in formal or non-formal situations or informally with your own family.

If you agree to participate I will send you a questionnaire three times at two week intervals. The questionnaire will be from six to nine pages in length. You will be requested to check your opinion in the first round. In rounds two and three you will compare your opinion with the majority and decide to converge or to give reasons for remaining a minority. Each questionnaire will require less than thirty minutes to complete.

Would you please return the enclosed reply sheet, in the envelope provided, immediately, indicating your intention to participate. The study will commence about May 1, 1976, if you reply quickly. Phone me collect at 306-242-6554 if you have questions.

Thank you in advance for your assistance.

Sincerely,

Wanda Young
Wanda Young,
Associate Professor

Reply To Invitation To Participate In Study

Please mark with an (X) the appropriate answer.

_____ YES, I will participate.

_____ No, I will not participate, because _____

Signature _____

Date _____

Mailing Address:

Telephone:

APPENDIX C

ROUND ONE COVER LETTER

A copy of the questionnaire may be obtained by writing the author



UNIVERSITY OF SASKATCHEWAN

SASKATOON, CANADA
S7N 0W0

COLLEGE OF HOME ECONOMICS

Thank you for agreeing to participate in my study "Objectives, Course Groupings And Content Topics For A Program In Family Studies For A College Of Home Economics: A Delphi Study". The Round One questionnaire is enclosed.

There are three parts. In Part One you are asked to evaluate each objective listed for a four year program in family studies for importance in producing graduates able to work professionally with families, as teachers and consultants. An objective is defined as an accurate description of an outcome of education.

In Part Two you are asked to evaluate course groupings and disciplines for importance in a program in family studies at a College of Home Economics.

In Part Three you are asked to evaluate content topics for importance in formal, non-formal and informal education systems, which are defined as follows:

A Formal education system offers an established curricula in a designated physical space. An example is a college of Home Economics.

A Non-formal education system is learning that does not occur in the institutions of the formal system nor in the home. An example is a visit to a doctor or banker.

An Informal education system is learning that occurs within the boundaries of the home and family environment. An example is a family planning to move.

Two copies of the questionnaire are enclosed. Please mark and return one copy to me in the envelope provided. I do hope that you can send it to me by return mail, as the study is planned for two more rounds at two week intervals. Please mark the second copy of the questionnaire and retain it to compare with rounds two and three. There are no restrictions on the number of times you use one descriptor in the scale.

Thank you very much for your cooperation in this study.

Sincerely,

Wanda Young

APPENDIX D

ROUND TWO COVER LETTER, AND APPENDIX

A copy of the questionnaire may be obtained by writing the author



Feedback from Round One of "our" Delphi study on Family Studies is enclosed. Thank you very much for your comments and early replies. To meet the schedule it is necessary for me to have returns within a week after I have mailed them.

New Features

Additional objectives, course groupings and content topics supplied by the panelists are listed at the end of each part. Please evaluate them with the original items.

Statistics are reported in two ways:

(1) There is a Report column in which each cell has two levels. The top level number is the Median which is the score that divides the ranked scores in half or the midpoint. The bottom level numbers show the Interquartile Range (Q3-Q1) which is the distance between the point on the scale below which 25% of the scores lie and the point above which 25% of the scores lie or the middle 50%.

(2) There is a visual report in which the symbol M for Median is placed in the scale. Note that numbers have been added to the scale. Brackets only are placed in the bottom of each cell to show the Interquartile Range. You will superimpose your judgement by placing an (X) over these markings. Here is an example.

OBJECTIVES	REPORT	SCALE
	Median Q3-Q1	V.I. I. S.I. U. ...4...3...2...1
33. Art	2.0 2.7-1.3	...4...3...2...1 (M)

My mark for Art in Round One was in the V.I. column. This is outside the interquartile range. I decide to move and place the Round Two (X) in the S.I. column or I decide to remain outside the interquartile range and place my Round Two (X) in the V.I. column indicating under 33. Art that I think an understanding of art will provide a communication like with clients.

Attached to this letter are three appendices.

(1) Appendix A is in two parts. Definitions requested by panelists are in the first part. Definitions supplied by panelists are in the second part.

(2) In Appendix B, entitled "Interaction" there is a section of discussion questions from panelists and a section of comments. These are arranged with general statements first, followed by statements specific to Part 1, Part 2 and Part 3.

(3) Appendix C includes a statistical report to supplement the statistics reported in the instrument. For Part 1 and Part 2 there is a rank order determined from the means. The items placed first are those most panelists considered very important. Those most panelists considered unimportant are placed last.

For Part 3 there is a report of the Median and Interquartile Range for each of the education systems. There is not sufficient space in the instrument for this report.

If you wish to respond to any item please use the sheet of paper at the end of the instrument, clearly marking the part and the item you are challenging.

Procedures

Please check your copy of Round One to determine the relationship of your judgement to the group judgement. If you do not have a copy of Round One, please call me collect at (306) 242-6554 for the information.

In Round Two please mark new items and original items maintaining your position or moving inside the interquartile range. If you decide to remain outside the interquartile range (in the top or bottom 25%) please indicate your reason in the space below the item.

Please note that Parts 1 and 2 are addressed specifically to objectives and course groupings (or disciplines—not individual classes) for a program in family studies in a college of home economics, which is part of the formal education system. Part 3 is general, referring not only to the formal education system, but also to the non-formal system in the community and the informal system in the home. Part 3 considers lifelong learning for any individual. In part 3 you are answering the question "How important is this content item for this particular education system, dealing with each item for the formal, non-formal and informal systems in turn?

Inside the cover there is an information section and extra space. When you are marking the instrument could you please use large, firm strokes with a dark pen. Please sign the cover sheet.

Round Two instrument is longer as you are now beginning to interact. Thank you for the time that you have devoted to this study. I hope you will continue to support the project by taking part in the interaction and by returning Round Two, by **return** mail, in the envelope provided. The final round should come to you in about two weeks if Round Two returns are prompt.

Sincerely,

Wanda Young
Wanda Young



Definitions Requested By Panelists

Biology is a branch of knowledge that deals with living organisms (plants and animals) and vital processes (origin, development, structure and function). (adapted from Webster International)

Censorship is acting to determine policy which examines communication materials to remove objectionable parts. (adapted from American Heritage)

Coping is a process in which problems and difficulties are faced, encountered and expedited or overcome. (adapted from Webster)

Decision is the act of settling or terminating a process in order to end uncertainty or contention. It is done by making a choice or judgement. (adapted from Webster)

Delphi Method is "a set of procedures to elicit and refine the opinion of a group of people about a complex problem." (Weatherspoon and Swenson, 1974.) Early Delphi studies went four rounds or more, starting with a question and a blank page. To eliminate one round this study used a structured Round One. Early studies dealt with probable, possible, preferable forecasts for long term projects. This study deals with a short term project and the preferable rating.

Design is a study in which the mind conceives, creates, plans or calculates in a conscious attempt to change man and his environment to improve the quality of life or serve a predetermined end. (adapted from Churchman and Webster)

Family Life Cycle is a developmental theory of family used by researchers such as the Duvalls, Rodgers, Hill and Hansen. The family life cycle variable identifies changes that result from progression through a series of stages. Duvall includes family stages as follows: beginning families; child bearing; preschool children; public school children; teenage children; launching; pre-retirement; aging.

Homemaking is the art of preparing an environment for a family. It includes such functions as protection from the elements; provision of nourishment, and meeting social needs of individual members. More than a century ago homemaking was learned by modelling the parents. When women began to work in industry, elementary and secondary schools introduced courses in homemaking and the university included programs to train the teachers.

Middle Age is the "period when the children leave home and the breadwinners leave their jobs." (Neugarten, 1968)

Parent Education is "a phase of adult education dealing with child care and the improvement of family living." (Good-Dictionary of Education Terms)

Professional is "one who has acquired a learned skill and conforms to the ethical standards of the profession in which the skill is practiced." (Good)

Religion is the study "of man's encounter with that which is viewed as divine or as ultimate reality" (Good). "The study of institutionalized expressions of sacred beliefs, observances and social practices found within a given cultural context." (Webster)

Sexuality is a study of attitudes toward sexual behavior determined by the interaction of personality and sex, based on concepts from biochemistry, physiology and psychology.

Social Work is "programs and procedures for the improvement of societal conditions affecting the individual or family unit, including both case work and group process." (Good)

Societal Issues or social issues is a study of problems and events that affect living in a society with cooperative, interdependent relationships.

Women's Studies is "an academic discipline that incorporates courses about women either separately" (ERIC) or as a compensatory supplement to the male based curriculum. Topics such as function of women, status of women, history of women, women writers are included. (adapted from Howe)

Definitions Supplied By Panelists

Communications

- Communication is the process. (V.I.)
- Communications are the messages. (I.)
- Communications is interpersonal interaction.

English or French

- This means the language necessary for effective communication.

Gerontology is the study of aging.

Homemaking is problem solving, decision making, thinking critically and creatively. It is not sweeping the corners at 7 a.m.

Maturation is related to development of teenagers.

Sexuality helps one to understand the opposite sex and the concept of equality.

Social Work means case work and by-laws.

APPENDIX B: INTERACTION

Questions Raised By Panelists

1. What is the meaning of family studies?
2. How does a program in family studies differ from home economics?
3. How would a program in family studies differ from the program for social work, sociology and psychology?
4. What are the job opportunities for a graduate from four years in family studies?
5. How can values be taught in the formal education system?
6. Whose values will be taught?
7. How much study is required in the various courses?

Comments Supplied by Panelists

The number in brackets refer to the item on the Round One instrument. e.g. (#4) in 11 below refers to item 4, part 1.

General Comments

8. Experts in a narrow or special field can be frightening people.
9. The graduates from a program in family studies should have low income people in the target group.

Part 1: Objectives

10. These objectives seem out of date.
11. These objectives seem too broad.
(#4, 8, 13, 15, 17)
12. These objectives seem vague.
(#9, 16)
13. Other agencies and professions have mandates in the territory of some of these objectives.
(#1, 2, 6, 7, 12, 14)
14. As written, these objectives imply expertise beyond the role of the home economist.
(#1, 10)
15. The following comments refer to specific objectives. Only the original number from Part 1 is used.
 - (#2) The stress level in families is directly related to economic conditions in the environment.
 - (#2) A farm family sets goals and budgets within the projections for grain sales.
 - (#5) There has been too much emphasis on families as consumers.
 - (#6) Persons entering a program in family studies should have enough aesthetic appreciation to encourage the quality of creativity in the client family.
 - (#8) This item is a factor in dissatisfaction, self-destruction and low productivity in Canada.
 - (#13) General education should be a part of all education to the end of high school and throughout life, informally and non-formally.
 - (#13 and 17) These objectives may be by-products of other objectives.
 - (#14) Home economists should only know where to send clients for such help.
 - (#17) These areas should be distributed over all four years.
 - (#17) Some colleges of home economics have competed with science degrees.

16. The following objectives require editing or clarification as suggested.

(#1, 3, 10) Replace the word "improve" with confirm or add to.

Add "and refine what people already know".

Insert "certain" before conditions

(#4) I understand "to provide insight into factors affecting social change".

(#5) I would separate this objective

(a) To focus on the family as a social unit.

(b) To focus on family members as consumers of goods and services.

(#7) I suggest replacing the word "responsible" with knowledge about or sensitive to.

Replace the words "supportive care".

(#8) This objective may include counselling training.

(#11) add, to "solution" of problems.

(#13) Add "and professional preparation".

(#14) This could be rewritten in terms of outcomes for students.

(#15) To communicate could be interpreted as interpersonal or through media and print.

Part 2: Course Groupings

17. To avoid being too restrictive, students should be permitted a certain number of electives.

18. All course groupings are necessary. Those marked S.I. should be prerequisites from high school.

19. Some courses are required as prerequisites for others. (#3 chemistry for both #21 nutrition and #32 textiles)

20. Much time is wasted on theory for theory's sake, not meeting the real need of application of knowledge.

21. To develop the moral fibre of the individual each course should stress high ideals, goals and principles.

22. Home economics cannot cover everything. The social work profession should cover #28, 29, 30 and 31.

23. Combine: #5 clothing and #32 textiles.

#16 food preparation and #21 nutrition.

#15 family finance and #14 family management.

24. The following statements refer to specific course groupings. Only the original number from Part 1 is used.

(#1) This could include both social and physical anthropology.

(#3) Chemistry will help one to understand physiology, nutrition and drug problems.

(#5) Clothing should be studied from the psychological viewpoint.

(#8) If Consumer Studies read Family Resources it would be more specific.

(#10) A concept of economics beyond that of home is needed.

(#11) English and French are important because of the bilingual situation in Canada.

(#11) The course should be useful in actual life.

(#14) I would delete the word "family" to read Management.

(#17) It is difficult for an individual counsellor to have much control of choice, costs and standards of housing.

(#19) Medicine could include genetics.

- (#26) Religion should be a comparative study.
- (#28) Help people to think and to prepare for marriage.
- (#31) Include statistics only for those going into research.
- (#33) A separate course in women's studies may lead to more dissention between the sexes.
- (#27) Move retirement preparation to part 3 with gerontology.
- (#34) Because students are far removed from an agricultural environment stress worldwide forces (climatic, technical, economic) which affect food production.
- (#41) Consider the effect of power between nations.

Part 3; Content Topics

- 25. Social and psychological professional consultations are significant in non-formal education systems.
- 26. Most learning occurs in informal situations. E.g. The child's first introduction to family studies is in informal systems.
- 27. Formal, non-formal and informal overlap.
- 28. The method of critical analysis should be used in all systems.
- 29. Combine: #7 coping under #5 conflict resolution.
 #22 sexuality, #20 middle age, #19 maturation,
 #13 gerontology under #11 family life cycle.
 #12 family planning under #10 family goals and objectives.
- 30. The following statements refer to specific content topics. Only the original number from Part 3 is used.
 - (#3) This could read human rights rather than civil rights.
 - (#5) This could read conflict management rather than conflict resolution.
 - (#12) Family planning is important because the world is over-populated.
 - (#14) Growth and self awareness could include parapsychology and ESP.
 - (#22) Much of the sexuality expressed in magazines, television and radio is "cheap garbage".
 - (#24) Formal training at university is too late for a study of values.
 - (#24) Values should be taught in the home (informal) but if the home fails then the formal and non-formal systems must take over.

APPENDIX C: STATISTICAL REPORT

Rank Order According To Means

Report For Part 3

Part 1: Objectives	Part 2: Course Groupings	Median Q3-Q1 Formal	Non-formal	Informal
8	6	1. 3.4	1. 3.0	1. 3.8
12	4	3.9-2.7	3.7-2.3	4.1-3.4
15	13			
16	14)	2. 2.0	2. 2.3	2. 2.5
5	15	2.7-1.4	3.0-1.5	3.3-1.7
10	21			
1	8	3. 2.9	3. 3.0	3. 3.0
3	25	3.5-2.2	3.5-2.3	3.5-2.2
4	7			
18	17	4. 3.9	4. 3.6	4. 3.7
7	30	4.1-3.6	4.0-2.9	4.1-3.2
11	10			
9	29	5. 3.3	5. 3.2	5. 3.7
6	12	3.9-2.6	3.9-2.6	4.0-3.0
2	27			
17	16	6. 3.0	6. 3.0	6. 2.9
14	18	3.5-2.6	3.5-2.3	3.5-2.1
13	28			
	20	7. 3.2	7. 3.1	7. 3.6
	2	3.8-2.5	3.7-2.4	4.1-3.0
	5			
	33	8. 2.6	8. 2.9	8. 3.3
	23	3.4-1.9	3.5-2.0	3.9-2.7
	1			
	11	9. 3.7	9. 3.3	9. 3.7
	32	4.0-3.0	3.9-2.7	4.1-3.1
	26			
	9	10. 3.3	10. 2.7	10. 3.8
	22	3.9-2.6	3.3-1.8	4.1-3.3
	3			
	31	11. 3.2	11. 2.3	11. 2.9
	19	3.7-2.7	3.0-1.5	3.5-2.2
	24			
		12. 3.5	12. 3.3	12. 3.7
		4.0-2.7	3.9-2.6	4.1-3.0
		13. 3.0	13. 3.0	13. 2.9
		3.6-2.5	3.5-2.1	3.6-2.1
		14. 3.6	14. 3.3	14. 3.8
		4.0-2.9	3.9-2.5	4.1-3.2
		15. 2.1	15. 3.0	15. 3.3
		2.9-1.5	3.6-2.3	3.9-2.7
		16. 2.7	16. 2.7	16. 3.6
		3.3-1.9	3.3-1.9	4.0-2.9

Report For Part 3**Median****Q3-Q1****Formal****Non-formal****Informal**

17. 3.7 4.0-3.0	17. 3.6 4.0-2.8	17. 3.8 4.2-3.5
18. 3.5 4.0-2.8	18. 3.4 4.0-2.5	18. 3.6 4.0-2.9
19. 3.1 3.7-2.6	19. 2.8 3.4-1.9	19. 3.3 3.9-2.7
20. 2.8 3.3-2.0	20. 2.8 3.4-2.0	20. 2.7 3.4-2.2
21. 3.2 3.8-2.6	21. 3.3 3.9-2.6	21. 3.4 4.0-2.5
22. 3.1 3.7-2.6	22. 2.9 3.4-2.3	22. 3.4 4.0-2.7
23. 3.1 3.7-2.5	23. 2.9 3.5-2.0	23. 3.8 4.0-3.3
24. 3.7 4.1-2.9	24. 3.4 4.0-2.7	24. 3.9 4.1-3.6

APPENDIX E

ROUND THREE COVER LETTER, QUESTIONNAIRE, AND INTERACTION



UNIVERSITY OF SASKATCHEWAN

OF HOME ECONOMICS

SASKATOON, CANADA
S7N 0W0

Thank you very much for the patience and thought that you have devoted to the Delphi study. My purpose is to achieve consensus about objectives, course groupings and content topics for a four year program in family studies, as a major in a college of home economics.

This is the final round. Please consider coming to the number closest to the median (midpoint) on each item or confirm your opinion. No verbal response is required. No copies need be made.

At the end of the questionnaire are several pages of items that will supply information and give you the opportunity to evaluate the Delphi method. Please complete these.

The interaction section from Round Two is enclosed at the back, for your interest. There were 750 comments. To save space and your time, only those items on which consensus has not yet been achieved are reported. Round Two was long, representing the equivalent of ten to twelve hours of committee work for each participant.

When the study is complete an abstract of findings will be sent to each participant. This is scheduled for the fall of 1976. To maintain the schedule it would assist me to have you return Round Three, in the envelope provided, preferably by return mail, or by June 30.

Thank you again for the support you are giving.

Have a happy summer.

Sincerely,

Wanda Young
Wanda Young

Phone: (306) 242-6554

Participants Signature

Number

Date:

Please make firm strokes with a dark pen or pencil.

Round Three, Delphi-Family Studies
Wanda Young,
June 23, 1976

Round Three

Part I: Objectives For A Program In Family Studies In A College Of Home Economics

Feedback from Round Two is indicated as follows:

Following the item, a (C) indicates that consensus has been reached. Consensus is agreement of more than fifty percent of the panelists.

The rank is based on the mean, which is the average of all scores. Part I has 29 possible ranks.

The median represents the midpoint of the scores.

The verbal report is based upon the key

V.I.	= very important	= 4
I.	= important	= 3
S.I.	= slightly important	= 2
U.	= unimportant	= 1

Please consider marking the number closest to the median. If you decide not to join consensus, please mark your opinion.

Please superimpose the mark (X) directly on the number in the scale at the right of the page.

An OBJECTIVE is defined as an accurate description of an outcome of education.

OBJECTIVES	REPORT		SCALE			
	Rank 29	Median Verbal	V.I.	I.	S.I.	U.
1. To identify and improve conditions contributing to man's health and physiological development. (C)	6	3.1 important	4	3	2	1
2. To have insight into business and marketing operations.	25	2.3 slightly important	4	3	2	1
3. To identify and improve conditions contributing to man's immediate environment (C)	7	3.2 important	4	3	2	1
4. To comprehend social change. (C)	9	3.1 important	4	3	2	1
5. To focus on the family as a social unit and on family members as consumers of goods and services. (C)	5	3.2 important	4	3	2	1

Round Three
Part I: Page 2

Key: V.I. = very important = 4
I. = important = 3
S.I. = slightly important = 2
U. = unimportant = 1

OBJECTIVES	REPORT		V.I.	SCALE		
	Rank 29	Median Verbal		I.	S.I.	U.
6. To encourage the development of aesthetic appreciation and creative ability.	23	2.4 slightly important	4	3	2	1
7. To be responsible for supportive care of individuals at different stages in the family life cycle. (C)	13	2.96 important	4	3	2	1
8. To provide training to work with children and families to contribute to the individual becoming a fulfilled and productive member of society.	2	3.6 very important	4	3	2	1
9. To provide an interdisciplinary study of the historical, contemporary and emerging family forms through formal coursework and interaction with individuals and families.	17	2.8 important	4	3	2	1
10. To identify and improve conditions contributing to man's psychological and social development. (C)	8	3.1 important	4	3	2	1
11. To be able to apply, in a creative manner, the scientific method to problems of community living. (C)	15	2.9 important	4	3	2	1
12. To help people in all strata of society in the management of their lives with respect to food, clothing, shelter and human relationships.	1	3.7 very important	4	3	2	1
13. To provide a general education.	28	2.2 slightly important	4	3	2	1
14. To provide liaison between consumers and producers of goods and services utilized by individuals and families.	27	2.2 slightly important	4	3	2	1

Round Three
Part I: Page 3

Key: V.I. = very important = 4
I. = important = 3
S.I. = slightly important = 2
U. = unimportant = 1

OBJECTIVES	REPORT		SCALE			
	Rank 29	Median Verbal	V.I.	I.	S.I.	U.
15. To communicate with skill with families at all levels of society.	3	3.6 very important	4	3	2	1
16. To focus on decision making and organizational processes related to development and use of family resources.	4	3.3 important	4	3	2	1
17. To provide a sound background in natural and social sciences.	24	2.4 slightly important	4	3	2	1
18. To know the physical and biological needs of family members in their various home settings whether actual or of the substitute institutional type. (C)	11	2.9 important	4	3	2	1

ADDITIONAL OBJECTIVES SUPPLIED BY PANELISTS

19. To be able to integrate scientific knowledge from the various disciplines which contribute to an understanding of family and individual life.	10	3.0 important	4	3	2	1
20. To be able to integrate material within the curriculum from one course to another.	14	2.9 important	4	3	2	1
21. To be able to translate scientific findings into policy for work with government and power groups and for programmatic statements to effect social change.	16	2.9 important	4	3	2	1
22. To act as a liaison and resource person between the individual, the family, the community and the various professions. (C)	12	3.02 important	4	3	2	1

Round Three
Part I: Page 4

Key: V.I. = very important = 4
I. = important = 3
S.I. = slightly important = 2
U. = unimportant = 1

OBJECTIVES	REPORT		SCALE			
	Rank 29	Median Verbal	V.I.	I.	S.I.	U.
23. To provide training for presentation of materials for press, media and other forms of communication.	20	2.6 important	4	3	2	1
24. To comprehend and advance inter-cultural relations between individuals.	21	2.4 slightly important	4	3	2	1
25. To study the processes by which laws can be improved to better family life.	19	2.7 important	4	3	2	1
26. To emphasize moral values.	26	2.3 slightly important	4	3	2	1
27. To assist families to adjust to, contribute to, and obtain maximum benefits from existing structures.	17	2.9 important	4	3	2	1
28. To influence innovation-decisions by securing the adoption of new ideas or by slowing down the diffusion and adoption of ideas.	29	1.9 slightly important	4	3	2	1
29. To focus on preschool child development in a modern society.	22	2.4 slightly important	4	3	2	1

Round Three

Part 2: COURSE GROUPINGS FOR A PROGRAM IN FAMILY STUDIES AT A COLLEGE OF HOME ECONOMICS

Feedback from Round Two is indicated as follows:

Following the item, a (C) indicates that consensus has been reached. Consensus is the agreement of more than fifty percent of the panelists.

The rank is based on the mean, which is the average of the scores. Part 2 has 41 possible ranks.

The verbal report is based upon the key

V.I.	= very important	= 4
I.	= important	= 3
S.I.	= slightly important	= 2
U.	= unimportant	= 1

Please consider marking the number closest to the median. If you decide not to join consensus, please mark your opinion.

Please superimpose the mark (X) directly on the number in the scale at the right.

COURSE GROUPINGS are a series of like units of instructions and disciplines.

COURSE GROUPINGS	REPORT		SCALE			
	Rank 41	Median Verbal	V.I.	I.	S.I.	U.
1. Anthropology (C)	30	2.2 slightly important	4	3	2	1
2. Biology	24	2.4 slightly important	4	3	2	1
3. Chemistry (C)	35	2.02 slightly important	4	3	2	1
4. Child Development (C)	2	3.8 very important	4	3	2	1
5. Clothing	25	2.3 slightly important	4	3	2	1
6. Communications	3	3.8 very important	4	3	2	1
7. Community Development (C)	9	3.1 important	4	3	2	1
8. Consumer Studies (C)	7	3.1 important	4	3	2	1

Round Three
Part 2: Page 2

Key: V.I. = very important = 4
I. = important = 3
S.I. = slightly important = 2
U. = unimportant = 1

COURSE GROUPINGS	REPORT		SCALE			
	Rank 41	Median Verbal	V.I.	I.	S.I.	U.
9. Design (C)	29	2.1 slightly important	4	3	2	1
10. Economics (C)	13	2.9 important	4	3	2	1
11. English or French	28	2.2 slightly important	4	3	2	1
12. Environmental Ecology (C)	14	2.9 important	4	3	2	1
13. Family Development (C)	1	3.9 very important	4	3	2	1
14. Family Management	4	3.8 very important	4	3	2	1
15. Family Finance (C)	5	3.8 very important	4	3	2	1
16. Food Preparation	15	2.9 important	4	3	2	1
17. Housing (C)	11	3.02 important	4	3	2	1
18. Law	19	2.8 important	4	3	2	1
19. Medicine (C)	38	1.8 slightly important	4	3	2	1
20. Non-traditional Families	23	2.5 important	4	3	2	1
21. Nutrition	6	3.6 very important	4	3	2	1
22. Philosophy (C)	34	2.02 slightly important	4	3	2	1

Round Three
Part 2: Page 3

Key: V.I. = very important = 4
I. = important = 3
S.I. = slightly important = 2
U. = unimportant = 1

COURSE GROUPINGS

	REPORT		SCALE			
	Rank 41	Median Verbal	V.I.	I.	S.I.	U.
23. Physiology	27	2.3 slightly important	4	3	2	1
24. Physics	41	1.4 unimportant	4	3	2	1
25. Psychology (C)	10	3.1 important	4	3	2	1
26. Religion (C)	32	2.1 slightly important	4	3	2	1
27. Retirement Preparation (C)	17	2.9 important	4	3	2	1
28. Social Work	22	2.7 important	4	3	2	1
29. Sociology (C)	16	2.9 important	4	3	2	1
30. Societal Issues (C)	12	2.9 important	4	3	2	1
31. Statistics (C)	37	1.9 slightly important	4	3	2	1
32. Textiles (C)	31	2.1 slightly important	4	3	2	1
33. Women's Studies (C)	33	2.0 slightly important	4	3	2	1

ADDITIONAL COURSE GROUPINGS SUPPLIES BY PANELISTS

34. Agriculture	39	1.7 slightly important	4	3	2	1
35. Computer Science	40	1.6 slightly important	4	3	2	1

Round Three
Part 2: Page 3

Key: V.I. = very important = 4
I. = important = 3
S.I. = slightly important = 2
U. = unimportant = 1

COURSE GROUPINGS	REPORT		SCALE			
	Rank 41	Median Verbal	V.I.	I.	S.I.	U.
36. Counselling (Methods of Therapy)	21	2.7 important	4	3	2	1
37. Food Management (Purchase, safety)	17	2.8 important	4	3	2	1
38. Futuristics (change and innovation)	26	2.3 slightly important	4	3	2	1
39. Government and Community Service	20	2.7 important	4	3	2	1
40. Human Development (adolescent, aged)	8	3.2 important	4	3	2	1
41. International Relations, including history	36	1.9 slightly important	4	3	2	1

Round Three

Part 3: CONTENT TOPICS FOR LEARNINGS IN FAMILY STUDIES IN FORMAL, NON-FORMAL AND INFORMAL EDUCATION SYSTEMS

Feedback from Round Two is indicated as follows:

A (C) placed below the figure for the median indicates that consensus has been reached. Consensus is the agreement of more than fifty percent of the panelists.

The median, in the M column, represents the midpoint of the scores.

The rank report is in the Interaction section on page 9 .

Please consider marking the number closest to the median. If you decide not to join consensus, please mark your opinion.

Please superimpose the mark (X) directly on the number in the scale.

The definitions for this area are:

A FORMAL education system offers an established curriculum in a designated physical space.

A NON-FORMAL system is learning that does not occur in the institutions of the formal system, nor in the home.

An INFORMAL system is learning that occurs within the boundaries of the home and family environment.

Content Topics are defined as what is dealt with in an area of study, such as a course grouping or discipline.

Key: V.I. = very important = 4
I. = important = 3
S.I. = slightly important = 2
U. = unimportant = 1

CONTENT TOPICS	FORMAL SCALE				NON-FORMAL SCALE				INFORMAL SCALE						
	M				M				M						
1. Care of Children	3.2 (C)	4	3	2	1	2.9 (C)	4	3	2	1	3.6	4	3	2	1
2. Censorship	1.8 (C)	4	3	2	1	1.9 (C)	4	3	2	1	2.1 (C)	4	3	2	1
3. Civil Rights	2.9 (C)	4	3	2	1	2.9 (C)	4	3	2	1	2.8 (C)	4	3	2	1
4. Communication Skills	3.9 (C)	4	3	2	1	3.3	4	3	2	1	3.7	4	3	2	1
5. Conflict Resolution	3.0 (C)	4	3	2	1	2.9 (C)	4	3	2	1	3.4	4	3	2	1

Round Three
Part 3: Page 2

Key: V.I. = very important = 4
I. = important = 3
S.I. = slightly important = 2
U. = unimportant = 1

CONTENT TOPICS	FORMAL SCALE				NON-FORMAL SCALE				INFORMAL SCALE						
	M				M				M						
6. Contemporary Society	2.9 (C)	4	3	2	1	2.8 (C)	4	3	2	1	2.8	4	3	2	1
7. Coping	2.9 (C)	4	3	2	1	2.9 (C)	4	3	2	1	3.4	4	3	2	1
8. Death and Dying	2.5	4	3	2	1	2.7	4	3	2	1	3.1 (C)	4	3	2	1
9. Decision Making	3.3	4	3	2	1	3.1 (C)	4	3	2	1	3.5	4	3	2	1
10. Family Goals & Objectives	3.1 (C)	4	3	2	1	2.6	4	3	2	1	3.4	4	3	2	1
11. Family Life Cycle	2.9 (C)	4	3	2	1	2.1 (C)	4	3	2	1	2.9 (C)	4	3	2	1
12. Family Planning	3.1 (C)	4	3	2	1	3.0 (C)	4	3	2	1	3.4	4	3	2	1
13. Gerontology	2.9 (C)	4	3	2	1	2.9 (C)	4	3	2	1	2.9 (C)	4	3	2	1
14. Growth and Self Awareness	3.1 (C)	4	3	2	1	2.7 (C)	4	3	2	1	3.0	4	3	2	1
15. Hobbies	1.9	4	3	2	1	2.7	4	3	2	1	3.0 (C)	4	3	2	1
16. Homemaking	2.4	4	3	2	1	2.5	4	3	2	1	3.3	4	3	2	1
17. Interpersonal Relation- ships	3.4	4	3	2	1	3.3	4	3	2	1	3.7	4	3	2	1
18. Living With Stress	3.1 (C)	4	3	2	1	3.2	4	3	2	1	3.3	4	3	2	1
19. Maturation	2.9 (C)	4	3	2	1	2.7	4	3	2	1	3.1 (C)	4	3	2	1

Round Three
Part 3: Page 3

Key: V.I. = very important = 4
I. = important = 3
S.I. = slightly important = 2
U. = unimportant = 1

CONTENT TOPICS	FORMAL SCALE				NON-FORMAL SCALE				INFORMAL SCALE						
	M				M				M						
20. Middle Age	2.6	4	3	2	1	2.7	4	3	2	1	2.8	4	3	2	1
21. Parent Education	2.9 (C)	4	3	2	1	3.1 (C)	4	3	2	1	3.2	4	3	2	1
22. Sexuality	2.9 (C)	4	3	2	1	2.9 (C)	4	3	2	1	3.3	4	3	2	1
23. Teaching Children About Sex	2.9 (C)	4	3	2	1	2.8	4	3	2	1	3.6	4	3	2	1
24. Values	3.4	4	3	2	1	3.2	4	3	2	1	3.8	4	3	2	1
ADDITIONAL CONTENT TOPICS SUPPLIED BY PANELISTS															
25. Civic Responsibilities	2.7	4	3	2	1	2.9	4	3	2	1	3.0	4	3	2	1
26. Community Support Groups	2.4	4	3	2	1	2.9 (C)	4	3	2	1	2.7	4	3	2	1
27. Family Breakdown	2.9	4	3	2	1	2.8	4	3	2	1	2.9	4	3	2	1
28. Marriage Preparation	3.2	4	3	2	1	3.2	4	3	2	1	3.5	4	3	2	1
29. Sexism (Stereotypes)	2.4	4	3	2	1	2.3	4	3	2	1	2.5	4	3	2	1
30. Sexual Therapy	2.0	4	3	2	1	2.2	4	3	2	1	2.2	4	3	2	1
31. Understanding Emotions	3.2	4	3	2	1	2.9	4	3	2	1	3.3	4	3	2	1
32. Use of Television and Radio in the Home	2.0	4	3	2	1	2.1	4	3	2	1	2.8	4	3	2	1
33. World Citizenship	2.5	4	3	2	1	2.7	4	3	2	1	2.6	4	3	2	1

Round Three

INFORMATION AND EVALUATION

Please place an (X) in the appropriate space or directly on the appropriate number if a scale is used.

1. How long did it take to answer Round Three?

- | | |
|----------------------------|------------------------|
| (1) _____ under 15 minutes | (4) _____ 1 to 2 hours |
| (2) _____ 16 to 30 minutes | (5) _____ over 2 hours |
| (3) _____ 31 to 60 minutes | |

2. What is your academic standing?

- | | Obtained in
Saskatchewan | Obtained
Elsewhere |
|-------------------|-----------------------------|-----------------------|
| (1) High School | _____ | _____ |
| (2) Baccalaureate | _____ | _____ |
| (3) Masters | _____ | _____ |
| (4) Doctoral | _____ | _____ |
| (5) Other | _____ | _____ |

3. What is your age group?

- (1) _____ under 25
 (2) _____ 25 to 44
 (3) _____ 45 to 60
 (4) _____ over 60

4. What is your sex?

- (1) _____ Female (2) _____ Male

5. What is your family situation?

- (1) _____ not married
 (2) _____ married couple
 (3) _____ separated
 (4) _____ divorced
 (5) _____ widowed
 (6) _____ single parent

6. How many children do you have?

- | | |
|-----------------|--------------------|
| (1) _____ none | (5) _____ four |
| (2) _____ one | (6) _____ five |
| (3) _____ two | (7) _____ six |
| (4) _____ three | (8) _____ over six |

Round Three

Information and Evaluation: Page 2

7. How related is your present occupation to families in the terms of this study?

Here is a hypothetical example:

Mary is a teacher, married with a three year old child, too busy to participate in community activities.

Mary would mark: very related = 4 in the formal row
 unrelated = 1 in the non-formal row
 very related = 4 in the informal row

The terms of this study are:

A FORMAL education system offers an established curricula in a designated physical space.

A NON-FORMAL education system is learning that does not occur in the institutions of the formal system, nor in the home.

An INFORMAL education system is learning that occurs within the boundaries of the home and family environment.

Key: Relationship

Very related = 4
 Related = 3
 Slightly related = 2
 Unrelated = 1

SYSTEM	RELATIONSHIP			
Formal	4	3	2	1
Non-Formal	4	3	2	1
Informal	4	3	2	1

8. How confident do you feel about discussing each part of the questionnaire in this study?

Key: Confidence

Certain = 5
 Reliable = 4
 Not determinable = 3
 Risky = 2
 Unreliable = 1

Round Three
Information and Evaluation: Page 3

8. (cont'd)

PART	CONFIDENCE				
Part 1: Objectives	5	4	3	2	1
Part 2: Course Groupings	5	4	3	2	1
Part 3: Content Topics	5	4	3	2	1

9. How do you assess your usual contribution in a face-to-face group discussion or committee meeting?

Key: Probability

Very probable	= 5
Probable	= 4
Either Way	= 3
Improbable	= 2
Very improbable	= 1

Description of Contribution	Probability				
first to offer ideas	5	4	3	2	1
offer many ideas	5	4	3	2	1
listen	5	4	3	2	1
agree with others	5	4	3	2	1
challenge other ideas	5	4	3	2	1
listen, then offer ideas	5	4	3	2	1

10. What is the effect of the Delphi method?

Key: Effectiveness

very effective	= 4
effective	= 3
slightly effective	= 2
not effective	= 1

Description	Effectiveness			
influence of feedback	4	3	2	1
added to knowledge (participants)	4	3	2	1
frustrated participant	4	3	2	1

Round Three
Information and Evaluation: Page 4

10. (cont'd)

Description	Effectiveness			
felt rushed for time	4	3	2	1
felt pressured to conform	4	3	2	1
interesting	4	3	2	1
gave opportunity to communicate	4	3	2	1
time consuming (more than committee)	4	3	2	1
thought provoking	4	3	2	1

other:

11. Could a Delphi Study of this type, on a continuing basis, assume the role of an advisory committee to a college?

(1) _____ yes (2) _____ no

12. How has your evaluation in each round of this study been influenced? Please place an (X) in all that apply.

- (1) _____ by the possible effect on society
- (2) _____ by the happiness of the undergraduate in a four year family studies program
- (3) _____ by consideration of the cost to implement such a program
- (4) _____ by knowledge of family needs
- (5) _____ by personal experience with university
- (6) _____ by the probable outcome of a four year baccalaureate in family studies
- (7) _____ by the opinions of other panelists as shown in the feedback
- (8) _____ by the belief that family studies means the same as home economics
- (9) _____ by the belief that family studies means the same as sociology and/or social work
- (10) _____ by the belief that family studies could be a part of a college of home economics
- (11) _____ by the notion that home economics is concerned with food preparation and clothing only
- (12) _____ by the belief that home economics has a wider meaning than food preparation and clothing

13. An abstract will be sent to you when the study is complete.

If this questionnaire is returned by return mail or by July 1, 1976 the abstract should be ready in the fall of 1976.

What mailing address should be used in the fall of 1976?

- (1) _____ the same
- (2) _____ other (please specify)

INTERACTION

From the Coordinator

The program discussed in this study is to be a four year baccalaureate in home economics, with a major in family studies.

You are contributing ideas that may be synthesized into a definition of family studies for Saskatchewan. The literature has few clear definitions of family studies. Some thought has been expressed about family counselling and marriage counselling. Some clarification has been made between sex education and family life education. The secondary education system in Ontario considers home economics and family studies to be the same thing.

Three definitions seem related to the thinking of some of the participants in this study.

Whaley (1972) "Family Life education is human education concerned with the total being ---- physical, mental, emotional and relations with others."

Goodwin (1972) "The family practitioner is understood to be a helper meeting practical problems having many causes that involve both individuals and groups of varying ages." The role is described by Goodwin as one of a change agent who encourages, assists and instigates behavioral modification.

Cromwell and Thomas (1976) "Family Life education promotes the delivery, coordination and integration of family development resources to individual units in order to improve family life."

Following the third round statistical analyses will be used to determine patterns in your answers.

Thank you for the reminders that consideration should be given to pre-requisites; job opportunities; electives; relationships between objectives, course groupings and content topics; and the opportunity for interdisciplinary or multidisciplinary activities.

For more statistically minded participants, the University of Alberta package was used to analyze the interquartile range. The range is a continuous measurement, but when it is recorded as a discrete number on a Likert scale the limits fall one-half unit above and below the value reported. In the calculation, the scores are ranked in a frequency distribution, interpolation occurs and a report such as 4.1 may be produced when many subjects rate an item at 4.

From The Panelists

Only those comments related to items which have not yet reached consensus are reported. The comments are summarized, following a statement of the number received. Items are written in full.

Part I: Objectives For A Program In Family Studies For A College of Home Economics

2. To have insight into business and marketing conditions.

7 comments, pointing out that the family itself is a business, in which economic problems often act as catalysts for stress. The production and maintenance of human capital in the family requires such insights.

6. To encourage the development of aesthetic appreciation and creative ability.

5 comments, ranging from a reminder that Maslow's hierarchy of needs includes aesthetics and creativity at a high level; to a reminder that a program cannot cover everything. The need to see beauty around us; to use simple things to beautify the space that is our environment; to gain a feeling of accomplishment lacking in routine jobs; to use leisure time creatively were mentioned.

8. To provide training to work with children and families to contribute to the individual becoming a fulfilled and productive member of society.

7 comments. Support was given to change the wording to "knowledge, insight or understanding" rather than training. One panelist stated that the undergraduate setting does not provide adequate time for such training.

9. To provide an interdisciplinary study of the historical, contemporary and emerging family forms through formal coursework and interaction with individuals and families.

14 comments. Panelists stated the wording is vague. Families have changed in the past. One learns from the past by testing theory and practice alternately, by evaluating current assumptions. Toffler's recognition of transience and the fractured family was cited.

12. To help people in all stratas of society in the management of their lives, with respect to food, clothing, shelter and human relationships.

8 comments pointing out that the primary needs listed above must be satisfied before secondary needs can be filled. Not only are these needs basic to life, they are basic to the home economics discipline.

13. To provide a general education.

12 comments expressing the dichotomy between professional studies and liberal education. It is more important to know how to think and apply knowledge than to know all the specifics. For an individual, general education should come before the specialization and continue non-formally and informally long after the program is completed. General education should be a qualification for a person with any university degree, but it may be limiting for employment.

14. To provide liaison between consumers and producers of goods and services utilized by individuals and families.

9 comments indicating that a link is needed to explain what is going on in industry; what causes price changes; what quality and kind of product is preferred and to assist in getting what is wanted. This is central in consumer education which may be a study separate from family studies.

15. To communicate with skill with families at all levels of society.

7 comments. It is important to help all families regardless of level adapt to change and relate within the family and with other institutions. In the past the home economics discipline has been centered on the middle class family.

16. To focus on decision making and organizational processes related to development and use of family resources.

4 comments. This item is related to general education. It is important that clients be able to think and to help themselves.

17. To provide a sound background in natural and social science.

8 comments, reinforcing the relation to general education. This objective could be met by entrance requirements. Other panelists viewed the natural and social science background as more important than specific detail because the graduate will understand cause and effect relationships that assist in decision making.

ADDITIONAL OBJECTIVES SUPPLIED BY PANELISTS

6 comments. Some state the additional objectives are too broad. Others state they are too limiting. They are related to principles already expressed.

19. To be able to integrate scientific knowledge from the various disciplines which contribute to an understanding of family and individual life.

4 comments. One panelist expressed doubt as to the possible application of scientific principles to the humanities.

20. To be able to integrate material within the curriculum from one course to another.

5 comments. One cites the meaning of integration is to unify into a whole, which is a part of the education process, the development of maturity and of creativity. Another panelist sees a criticism of the educative process, as this objective implies that integration is not being done now.

21. To translate scientific findings into policy for work with government and power groups and for programmatic statements to affect social change.

6 comments. A dislike for the words "power groups" was expressed. This objective was recommended for graduate students with an interest in law.

23. To provide training for presentation of materials for press media and other forms of communication.

6 comments pointing out that it is important that family studies teachers know how to communicate and what to communicate. The profession should be able to tell its own story without undue reliance on the media. (Coordinator note -- In most universities the study of interpersonal communication is distinct from that of communication arts or mass communications).

24. To comprehend and advance intercultural relations between individuals.

2 comments. Advance means to improve or to cause to occur sooner.

25. To study the processes by which laws can be improved to better family life.

4 comments. Current laws should be known to family studies personnel, but the process of law should be for law students.

26. To emphasize moral values.

22 comments primarily concerned with which values or whose values. One panelist suggested a change to "teach moral development" (i.e. Kohlberg) by presenting all of the facts so students can formulate their personal values. There are many values in North America which means that one set of values cannot be applied at all times and in all places.

27. To assist families adjust to, contribute to and obtain maximum benefits from existing structures.

10 comments. (Coordinator note -- existing structures are viable organizations, constitutions, or sub-systems such as government, agencies, professional associations, unions, businesses). Panelists see an implication that existing structures need no changing.

28. To influence innovation-decisions by securing the adoption of new ideas or slowing the diffusion and adoption of ideas.

18 comments. This objective describes the role of a change agent. The phrase to analyze and evaluate before adopting an idea might prevent the bandwagon effect evident in education recently. All students may not benefit from innovation.

29. To focus on preschool child development in a modern society.

10 comments recommending inclusion of this objective with adolescent development, and adult development into a study of the full family in its life cycle.

Part 2: Course Groupings For A Program In Family Studies At A College of Home Economics

2. Biology

3 comments. A study of genetics is important to human development.

5. Clothing

1 comment. Clothing is a need of all families. No other discipline deals with clothing.

6. Communications

7 comments. Communication can become a be-all, end-all cult. What is said is important, as unclear expression means unclear thinking. Many family problems arise from a lack of communication.

11. English or French

12 comments, primarily related to the base these studies give to communication. Recently language standards have dropped. English or French is required to be an effective student writing term papers or an effective professional writing reports and to understand and appreciate the writing and communication of others. The class as presently taught at the university, however, does not fulfill this need. A study of literature can provide insights into the characteristics and problems of families.

14. Family Management

1 comment. This is applied economics, physics and psychology.

16. Food Preparation

7 comments. As costs escalate and resources diminish this area increases in importance.

18. Law

6 comments. A family worker should be able to give a rudimentary interpretation of the law; to exert influence to change laws to benefit the family. Topics such as marriage laws, property, estates, wills, human rights, could be offered.

20. Non-traditional Families

9 comments. Both traditional and non-traditional families are served. An understanding of the non-traditional will supplement the study of "normal" families.

21. Nutrition

6 comments divided between the universal importance of nutrition and the recommendation that the specialization remain within the nutrition, food science major.

23. Physiology

3 comments. To Charlesworth, physiology is primary to human development. It is necessary for sex education.

24. Physics

4 comments. Physics is a difficult subject, worth taking because there are many applications in home economics areas concerned with the family environment.

28. Social Work

8 comments. Home economics has a broader approach than social work.

ADDITIONAL COURSE GROUPINGS SUGGESTED BY PANELISTS

4 comments. These courses could be useful electives.

34. Agriculture

5 comments. The area dealing with food production would be useful for a person working in rural Saskatchewan.

35. Computer Science

6 comments. This could be an elective for undergraduates interested in technology and research.

36. Counselling (Methods of Therapy)

7 comments. To be an effective counsellor more study time is required than would be available in this particular program.

37. Food Management (Purchase, Safety)

8 comments. This could be included with food preparation, family management and family finance.

38. Futuristics (Change and Innovation)

5 comments. This is a multidisciplinary study of change and what is needed and what may happen. There is an element of speculation that is a current fad.

39. Government and Community Services

3 comments. This is straightforward and subject to change so does not warrant course time.

40. Human Development

12 comments. Call the discipline human development and include a study of the child, the adolescent, middle age, adults and psychology.

41. International Relations, Including History

3 comments. This could be an interesting elective to fulfill the requirements for a general education.

Part 3: Content Topics For Learnings In Family Studies In Formal, Non-Formal and Informal Education Systems

4. Communication Skills

2 comments. Most persons can improve communication skills. Lack of effective communication may be the result of informal learning.

8. Death and Dying

5 comments. The reaction to death and dying is a very personal form of coping with more impact in the informal system.

9. Decision Making

3 comments. Scientifically derived theories are available for use in the formal system. Decision skills are acquired extraneously through coping.

10. Family Goals And Objectives

2 comments. More consideration of family goals could be given by the public in the non-formal system.

15. Hobbies

3 comments. Place hobbies in the non-formal setting where individual preferences of persons with increased leisure time may be considered.

16. Homemaking

7 comments, supporting the importance of the home and of home economics. "I think homemaking can be a supportive element in strengthening the family. In a home economics class students are in close proximity to a home setting and can learn joy with responsibility; consideration for others; sharing and caring".

17. Interpersonal Relationships

2 comments. This is the key to family relationships and the satisfaction of psychological needs.

18. Living with Stress

4 comments. This is related to coping, in informal settings.

20. Middle Age

5 comments. Students in formal setting should be aware of the stresses and conflicts of middle age, to prepare for their future role.

23. Teaching Children About Sex

5 comments, simply stating that sex education is a family responsibility. Too much information may cause perversions.

24. Values

5 comments. Values are best learned at home. Formal education can include a critical examination of different values, but should not impose one set of values.

ADDITIONAL CONTENT TOPICS SUPPLIED BY PANELISTS

7 comments. This seems to be an attempt to make home economics a panacea. The teaching profession has made this mistake and now is trying to backtrack. In promising the impossible we are spread too thin.

The amount of expertise developed in four years is insufficient. It is better to refer clients to specialists.

25. Civic Responsibilities

2 comments. The topic alligns with civil rights.

26. Community Support Groups

5 comments. This is related to the course grouping item, government and community services.

27. Family Breakdown

4 comments, primarily to include with other topics.

28. Marriage Preparation

4 comments. This is an interdisciplinary topic to be shared with other professionals.

29. Sexism (Stereotypes)

4 comments. Sexism assumes that one sex is superior -- a topic that has been overworked recently.

30. Sexual Therapy

11 comments. Interested persons could study after the baccalaureate and work experience.

31. Understanding Emotions

4 comments, primarily to include with other topics.

32. Use of Television And Radio In The Home

5 comments. Discuss in informal settings.

33. World Citizenship

5 comments, primarily to include in other topics.

In Part 3, if consensus has been reached in two of the three systems, the item did not appear in Interaction.

Part 3: Rank Order According to Means

Item	Rank, Out of 33		
	Formal	Non-Formal	Informal
1. Care of Children	5	10	4
2. Censorship	33	33	33
3. Civil Rights	22	17	26
4. Communication Skills	1	1	2
5. Conflict Resolution	11	9	10
6. Contemporary Society	16	19	25
7. Coping	14	12	11
8. Death and Dying	25	25	18
9. Decision Making	4	6	7
10. Family Goals and Objectives	12	27	9
11. Family Life Cycle	13	31	24
12. Family Planning	10	8	8
13. Gerontology	21	18	22
14. Growth and Self Awareness	6	11	6
15. Hobbies	32	23	20
16. Homemaking	27	28	15
17. Interpersonal Relationships	2	2	3
18. Living With Stress	7	5	14
19. Maturation	18	22	19
20. Middle Age	24	26	30
21. Parent Education	20	7	16
22. Sexuality	19	14	13

The rank is based upon the mean, which is the average of the scores.

Item	Formal	Rank, Out of 33 Non-Formal	Informal
23. Teaching Children About Sex	17	21	5
24. Values	3	3	1
25. Civic Responsibilities	23	15	21
26. Community Support Groups	29	16	29
27. Family Breakdown	15	20	23
28. Marriage Preparation	9	4	12
29. Sexism (Stereotypes)	28	29	31
30. Sexual Therapy	30	30	32
31. Understanding Emotions	8	13	17
32. Use of Television And Radio In The Home	31	32	27
33. World Citizenship	26	24	28

APPENDIX F

ADVISORY COMMITTEE LETTER AND QUESTIONNAIRE

A copy of the model may be obtained by writing the author



UNIVERSITY OF SASKATCHEWAN

**SASKATOON, CANADA
S7N 0W0**

COLLEGE OF HOME ECONOMICS

August 5, 1976.

In May you agreed to be a member of the advisory committee for my study "Objectives, Course Groupings and Content Topics for a Program in Family Studies in a College of Home Economics: A Delphi Study".

Ninety-three subjects, classified as specialists and generalists replied to the three round study. Feedback about opinions expresses in the preceeding round was distributed with the second and third rounds. These replies have been analyzed. A framework of objectives for a program in family studies in a College of Home Economics and a model of course groupings for such a four year program are enclosed.

Would you please read the framework of objectives and model of courses and complete the one-page questionnaire which accompanies this letter and return it to me in the envelope provided by return mail.

Thank you very much for your assistance with this project. When the study has been completed an abstract will be mailed to you.

Sincerely,

Wanda Young.

WY:LIW
Enclosures.

Advisory Committee

Signature

Number

DATE:

**Advisory Committee
Delphi-Family Studies
Wanda Young
August 5, 1976.**

Questionnaire: Reaction of Advisory Committee To Proposed Objectives,
Course Groupings and Content Topics for a Program in
Family Studies for a College of Home Economics

The enclosed framework for objectives, course groupings and content topics for a program in Family Studies for a College of Home Economics is formulated from the consensus of opinions of a Delphi panel of specialist and generalist experts.

Would you please answer the questions below for suitability of the framework for use in Saskatchewan.

- (1) Do you approve of the enclosed framework for a program in Family Studies for a College of Home Economics in Saskatchewan?

YES _____ NO _____

- (2) If the answer to (1) is Yes, what date do you see that such a program will be possible _____, probable _____.

- (3) Comments:

APPENDIX G

TABLES

TABLE 19.--Demographic Description of Panelists

Characteristics	Categories	Panelists	
		No.	%
Participant in prior Delphi	Yes	3	3.3
	No	88	94.5
	Missing	<u>2</u>	<u>2.2</u>
	Total	93	100.0
Highest Academic Level	Baccalaureate	62	66.6
	Masters	18	19.4
	Doctoral	7	7.5
	Other	5	5.4
	Missing	<u>1</u>	<u>1.1</u>
	Total	93	100.0
Degrees Obtained in	Saskatchewan	64	68.8
	Elsewhere	28	30.1
	Missing	<u>1</u>	<u>1.1</u>
	Total	83	100.0
Age	Under 25	7	68.8
	25 to 44	53	57.0
	45 to 60	27	29.0
	Over 60	<u>6</u>	<u>6.5</u>
	Total	93	100.0
Sex	Female	76	81.7
	Male	<u>17</u>	<u>18.3</u>
	Total	93	100.0
Marital Status	Not Married	19	20.4
	Married Couple	62	66.7
	Separated	6	6.5
	Divorced	3	3.2
	Widowed	3	3.2
	Single Parent	<u>0</u>	<u>0</u>
	Total	93	100.0
Children	None	31	33.3
	One	7	7.5
	Two	30	32.3
	Three	12	12.9
	Four	7	7.5
	Five	4	4.3
	Six	1	1.1
	Over Six	<u>1</u>	<u>1.1</u>
	Total	93	100.0

TABLE 20.--Percentage of Demographic Variables Within Six Sections*
of Panelists

Demographic	1	2	3	4	5	6	Total
Highest Academic Level							
B.A.	11.1	28.6	33.4	9.5	7.9	9.5	100.0
M.A.	44.4	5.6	...	44.4	5.6	...	100.0
Ph.D.	85.7	...	...	...	14.3	...	100.0
Other	...	40.0	40.0	...	20.0	...	100.0
Age							
-25	28.6	42.8	28.6	...	...	...	100.0
25 - 44	20.0	25.5	21.8	14.5	9.1	9.1	100.0
45 - 60	30.8	15.4	19.2	15.4	11.5	7.7	100.0
60 +	16.7	...	33.3	33.3	16.7	...	100.0
Sex							
F	26.6	27.8	25.3	1.3	8.9	10.1	100.0
M	6.7	...	...	86.6	6.7	...	100.0
Marital Status							
Not Married	35.0	40.0	5.0	5.0	15.0	0	100.0
Married Couple	21.8	18.8	25.0	17.2	4.7	12.5	100.0
Separated	33.3	16.7	33.3	16.7	...	...	100.0
Divorced	33.3	33.3	33.3	...	...	...	99.9
Widowed	33.3	...	...	33.3	33.3	...	99.9
Single Parent	...	...	...	...	...	...	
Children							
0	41.4	37.9	13.8	...	6.9	...	100.0
1	...	28.6	28.6	...	42.8	...	100.0
2	15.2	18.2	15.2	33.2	...	18.2	100.0
3	30.0	20.0	20.0	20.0	10.0	...	100.0
4	12.5	...	75.0	...	...	12.5	100.0
5	25.0	...	25.0	25.0	...	25.0	100.0
6	...	...	...	...	100.0	...	100.0
6 +	...	...	100.0	...	...	...	100.0

*Key 1. Specialist hierarchical 4. Generalist hierarchical
2. Specialist heterogeneous 5. Generalist heterogeneous
3. Specialist homogeneous 6. Generalist homogeneous

TABLE 21.--Relationship of Occupation to Formal, Non-Formal, and Informal Systems, Self Description by Panelists

Description	Formal		Non-Formal		Informal	
	No.	%	No.	%	No.	%
Very related	45	48.4	22	23.7	52	55.9
Related	14	15.1	36	38.7	19	20.4
Slightly related	15	16.1	18	19.4	11	11.8
Unrelated	14	15.1	12	12.9	6	6.5
Missing	5	5.3	5	5.3	5	5.3
Total	93	100.0	93	100.0	93	100.0

TABLE 22.--Confidence in Ability to Rate Objectives, Course Groupings and Content Topics of Panelists

Degree of Confidence	Part One Objectives		Part Two Course Groupings		Part Three Content Topics	
	No.	%	No.	%	No.	%
Certain	9	9.7	7	7.4	11	11.8
Reliable	59	63.4	53	57.0	45	48.3
Not determinable	19	20.4	26	28.0	28	30.0
Risky	3	3.2	5	5.4	6	6.5
Unreliable	1	1.1	0	0	1	1.1
Missing	2	2.2	2	2.2	2	2.2
Total	93	100.00	93	100.0	93	100.0

TABLE 23.--Contribution of Panelist in Face to Face Discussion, Self Description

Description	Very Probable		Probable		Either Way		Improbable		Very Improbable		Missing		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
First to offer ideas	4	4.4	31	34.1	40	44.0	13	14.3	3	3.3	2	2.2	93	100.0
Offer many ideas	4	4.4	28	30.8	41	45.1	15	16.5	3	3.3	2	2.2	93	100.0
Listen	31	33.7	40	43.5	19	20.7	1	1.1	1	1.1	1	1.1	93	100.0
Agree with others	1	1.1	18	19.4	71	76.3	3	3.2	0	0	0	0	93	100.0
Challenge other ideas	7	7.5	31	33.3	47	50.5	7	7.5	1	1.1	1	1.1	93	100.0
Listen, then offer ideas	21	22.6	48	51.6	23	24.7	1	1.1	0	0	0	0	93	100.0

TABLE 24.--Means for Rounds One, Two, and Three

Part 1: Objectives

Item	Round 1 Mean	Round 2 Mean	Round 3 Mean
Health	3.333	3.219	3.096
Operations	2.652	2.424	2.287
Environment	3.326	3.214	3.138
Change	3.258	3.116	3.053
Consumer	3.409	3.267	3.043
Creativity	2.656	2.488	2.372
Care	3.129	2.942	2.957
Children	3.645	3.535	3.717
Interdisciplinary	2.935	2.765	2.915
Social	3.387	3.186	3.043
Apply Science	2.968	2.814	2.882
Management	3.587	3.581	3.815
General	2.419	2.256	2.204
Resource	2.527	2.291	2.172
Communicate	3.570	3.512	3.755
Decision	3.446	3.405	3.204
Science	2.645	2.442	2.245
Physical	3.151	2.966	2.957
*Disciplines	...	3.012	2.979
*Courses	...	2.904	2.915
*Apply Theory	...	2.790	2.839
*Professions	...	2.965	2.968
*Media	...	2.627	2.702
*Intercultural	...	2.518	2.194
*Legal	...	2.671	2.720
*Values	...	2.402	2.228
*Societal Structures	...	2.771	2.882
*Innovation	...	1.950	1.946
*Pre-school	...	2.488	2.280

TABLE 24.--Continued

Part 2: Course Groupings

Item	Round 1 Mean	Round 2 Mean	Round 3 Mean
Anthropology	2.430	2.233	2.097
Biology	2.624	2.442	2.280
Chemistry	2.161	2.081	2.163
Child Development	3.785	3.756	3.828
Clothing	2.576	2.400	2.258
Communications	3.793	3.750	3.849
Community	3.239	3.118	3.065
Consumer Studies	3.396	3.188	3.054
Design	2.312	2.256	2.118
Economics	3.043	2.894	2.946
English	2.413	2.324	2.258
Environmental Ecology	2.967	2.847	2.968
Family Development	3.774	3.779	3.839
Family Management	3.774	3.698	3.882
Family Finance	3.699	3.651	3.882
Food	2.935	2.824	3.011
Housing	3.204	3.035	3.075
Law	2.871	2.744	2.903
Medicine	2.054	1.800	1.935
Non-traditional Family	2.710	2.535	2.615
Nutrition	3.462	3.535	3.750
Philosophy	2.207	2.091	2.033
Physiology	2.516	2.334	2.183
Physics	1.710	1.512	1.333
Psychology	3.269	3.070	3.022
Religion	2.337	2.119	2.065
Retirement Preparation	2.946	2.800	2.946
Social Work	2.739	2.595	2.763
Sociology	3.043	2.817	2.925
Societal Issues	3.077	2.965	2.968
Statistics	2.108	1.837	1.946
Textiles	2.344	2.151	2.097
Women's Studies	2.556	2.118	2.140
*Agriculture	...	1.774	1.892
*Computer Science	...	1.612	1.731
*Counselling	...	2.600	2.728
*Food Management	...	2.800	2.892
*Futuristics	...	2.341	2.011
*Government Service	...	2.631	2.763
*Human Development	...	3.169	3.161
*International Relationships	...	1.918	1.957

TABLE 24.--Continued

Part 3: Content Topics; Formal

Item	Round 1 Mean	Round 2 Mean	Round 3 Mean
Care of Child	3.239	3.209	2.989
Censorship	2.100	1.791	1.849
Civic Responsibility	2.868	2.779	2.903
Communication Skills	3.774	3.788	3.849
Conflict Resolution	3.185	3.025	3.064
Contemporary Society	3.033	2.894	2.947
Coping	3.133	2.953	2.979
Death & Dying	2.674	2.547	2.596
Decision Making	3.495	3.282	3.181
Family Goals	3.207	3.007	3.032
Family Life Cycle	3.154	2.988	2.926
Family Planning	3.264	3.028	3.032
Gerontology	3.011	2.801	2.926
Growth	3.387	3.176	3.106
Hobbies	2.207	1.919	1.936
Homemaking	2.648	2.488	2.319
International Relations	3.478	3.407	3.170
Living with Stress	3.359	3.174	3.021
Maturation	3.087	2.809	2.947
Middle Age	2.707	2.570	2.691
Parent Education	3.152	2.802	3.032
Sexuality	3.066	2.808	2.968
Teach Child Sex	3.054	2.837	2.915
Values	3.467	3.337	3.138
*Civic Responsibility	...	2.679	2.710
*Consumer Groups	...	2.451	2.174
*Family Breakdown	...	2.912	2.872
*Marriage Preparation	...	3.033	2.989
*Sex Stereotype	...	2.462	2.239
*Sexual Therapy	...	2.112	1.935
*Emotions	...	3.085	3.053
*TV & Radio	...	2.084	2.000
*World Citizenship	...	2.506	2.409

TABLE 24.--Continued

Part 3: Content Topics; Non-Formal

Item	Round 1 Mean	Round 2 Mean	Round 3 Mean
Care of Child	3.000	2.919	2.946
Censorship	2.341	1.976	1.892
Civil Rights	3.000	2.802	2.925
Communication Skills	3.422	3.329	3.185
Conflict Resolution	3.174	2.953	3.000
Contemporary Society	2.902	2.774	2.957
Coping	3.091	2.900	3.000
Death & Dying	2.833	2.605	2.772
Decision Making	3.233	3.119	3.043
Family Goals	2.637	2.566	2.728
Family Life Cycle	2.344	2.167	2.086
Family Planning	3.189	2.035	2.989
Gerontology	2.908	2.795	2.903
Growth	3.178	2.904	2.946
Hobbies	2.945	2.643	2.677
Homemaking	2.633	2.470	2.538
International Relations	3.411	3.298	3.151
Living with Stress	3.187	3.131	3.000
Maturation	2.742	2.675	2.815
Middle Age	2.753	2.601	2.763
Parent Education	3.176	3.036	3.054
Sexuality	2.932	2.805	2.967
Teach Child Sex Values	2.843	2.714	2.848
	3.281	3.226	3.065
*Civic Responsibility	...	2.804	2.882
*Consumer Groups	...	2.803	2.913
*Family Breakdown	...	2.760	2.806
*Marriage Preparation	...	3.159	2.968
*Sex Stereotype	...	2.443	2.228
*Sexual Therapy	...	2.237	2.021
*Emotions	...	2.854	2.892
*TV & Radio	...	2.110	2.000
*World Citizenship	...	2.610	2.638

TABLE 24.--Continued

Part 3: Content Topics; Informal

Item	Round 1 Mean	Round 2 Mean	Round 3 Mean
Care of Child	3.663	3.529	3.609
Censorship	2.522	2.165	2.065
Civic Responsibility	2.933	2.703	2.914
Communication Skills	3.593	3.576	3.750
Conflict Resolution	3.511	3.376	3.247
Contemporary Society	2.867	2.714	2.892
Coping	3.489	3.365	3.194
Death & Dying	3.256	3.129	3.011
Decision Making	3.593	3.452	3.495
Family Goals	3.641	3.405	3.283
Family Life Cycle	2.900	2.788	2.914
Family Planning	3.533	3.407	3.247
Gerontology	2.965	2.893	2.925
Growth	3.622	3.488	3.140
Hobbies	3.256	3.000	3.011
Homemaking	3.456	3.286	3.151
International Relations	3.736	3.565	3.742
Living with Stress	3.433	3.306	3.140
Maturation	3.233	3.083	3.032
Middle Age	2.843	2.406	2.914
Parent Education	3.211	3.250	3.054
Sexuality	3.318	3.310	3.143
Teach Child Sex	3.607	3.506	3.634
Values	3.800	3.682	3.796
*Civic Responsibility	...	2.976	2.957
*Consumer Groups	...	2.530	2.747
*Family Breakdown	...	2.875	2.871
*Marriage Preparation	...	3.363	3.387
*Sex Stereotype	...	2.363	2.516
*Sexual Therapy	...	2.275	2.022
*Emotions	...	3.229	3.097
*TV & Radio	...	2.614	2.739
*World Citizenship	...	2.566	2.656

Means are calculated on a scale of 4

*Additional items supplied by panelists

TABLE 25.--Analysis of Variance for Round Three: Specialist and Generalist Groups, with Hierarchical, Heterogeneous, and Homogeneous Sections

Part 1: Objectives

Item	Total DF	F Interaction	F Main Effects Sections	F Main Effects Groups	F Main Effects
Health	92	0.742	0.096	0.579	0.237
Operations	92	2.658	1.425	0.505	1.054
Environment	92	3.544b	2.282	0.446	1.616
Change	92	1.953	0.617	0.741	0.723
Consumer	92	0.938	1.519	0.045	1.061
Creativity	89	0.388	1.009	0.054	0.726
Care	89	0.078	1.702	1.099	1.388
Children	89	4.418b	1.663	0.740	1.367
Interdisciplinary	89	0.057	0.222	5.075b	1.819
Social	89	0.996	0.653	0.217	0.473
Apply Science	88	0.684	0.794	1.084	0.831
Management	88	3.130b	0.180	0.722	0.332
General	88	1.431	2.682	0.373	2.003
Resource	88	0.386	2.041	0.725	1.613
Communicate	88	2.975	0.002	1.188	0.405
Decision	91	0.115	0.299	1.191	0.541
Science	91	0.543	0.327	1.059	0.516
Physical	91	1.540	0.734	0.040	0.496
*Disciplines	91	3.327b	1.743	4.348b	2.353
*Courses	91	1.246	0.622	0.326	0.553
*Apply Theory	89	1.529	0.012	0.721	0.247
*Professions	89	5.371b	1.128	0.000	0.753
*Media	89	1.573	1.370	0.497	1.019
*Intercultural	89	0.421	0.513	4.678b	1.938
*Legal	89	4.232b	0.292	0.216	0.249
*Values	89	0.495	4.155b	2.849	4.096b
*Societal Structures	89	0.182	0.678	0.103	0.501
*Innovation	89	0.339	0.064	0.520	0.210
*Pre-school	89	0.183	0.735	0.394	0.609

TABLE 25.--Continued

Part 2: Course Groupings

Item	Total DF	F Interaction	F Main Effects Sections	F Main Effects Groups	F Main Effects
Anthropology	90	0.144	1.424	0.425	1.062
Biology	90	0.443	1.233	0.143	0.843
Chemistry	90	0.027	0.043	0.203	0.097
Child Development	90	1.434	4.288b	2.395	3.785b
Clothing	90	2.247	1.054	0.233	0.756
Communications	91	4.372b	2.568	4.396b	3.434b
Community	91	1.256	0.071	0.682	0.258
Consumer Studies	91	0.257	1.108	0.737	0.926
Design	91	1.234	2.775	5.904b	3.600b
Economics	91	0.604	1.179	1.682	1.243
English	91	0.035	0.104	0.533	0.241
Environmental Ecology	91	0.203	0.604	0.226	0.504
Family Development	91	0.329	1.144	0.005	0.764
Family Management	91	0.698	0.296	0.052	0.218
Family Finance	91	2.254	0.296	0.739	0.456
Food	89	0.289	0.177	0.005	0.125
Housing	89	3.123b	0.174	2.079	0.844
Law	89	0.302	0.942	0.621	0.847
Medicine	89	0.138	1.199	1.536	1.188
Non-traditional Family	89	1.826	0.977	2.007	1.286
Nutrition	89	2.053	2.874	0.841	2.043
Philosophy	89	0.289	2.154	1.409	1.827
Physiology	89	1.159	0.904	0.478	0.161
Physics	89	0.587	0.617	0.263	0.460
Psychology	89	0.840	0.649	0.211	0.481
Religion	90	0.266	0.095	3.322	1.228
Retirement Preparation	90	1.620	0.488	0.004	0.325
Social Work	90	1.458	0.228	0.071	0.185
Sociology	90	2.264	0.617	0.213	0.455
Societal Issues	90	0.220	0.609	0.209	0.505
Statistics	91	0.523	1.128	1.696	1.301
Textiles	91	2.638	0.621	0.890	0.653
Women's Studies	91	1.767	0.285	0.405	0.349
*Agriculture	91	0.507	0.045	0.797	0.309
*Computer Science	91	2.929	0.505	7.235b	2.911b
*Counselling	90	1.508	1.030	2.200	1.553
*Food Management	90	0.293	0.618	0.105	0.446
*Futuristics	90	0.065	0.384	1.392	0.669
*Government Service	90	2.153	0.012	0.219	0.086
*Human Development	90	0.183	0.532	0.123	0.403
*International Relationships	91	0.110	2.416	2.716	2.426

TABLE 25.--Continued

Part 3: Content Topics; Formal

Item	Total DF	F Interaction	F Main Effects Sections	F Main Effects Groups	F Main Effects
Care of Child	90	1.871	2.099	0.002	1.410
Censorship	90	0.175	0.637	0.243	0.471
Civil Rights	90	2.799	4.065b	1.047	3.197b
Communication Skills	90	8.120b	1.184	15.958b	5.957b
Conflict Resolution	90	0.649	1.094	2.236	1.465
Contemporary Society	91	6.033b	2.497	8.704b	4.128b
Coping	91	1.292	0.552	1.006	0.656
Death & Dying	91	0.796	0.931	4.369b	1.929
Decision Making	91	0.590	3.074b	5.604b	3.892b
Family Goals	91	0.975	0.223	1.442	0.590
Family Life Cycle	92	0.599	0.008	0.023	0.012
Family Planning	92	2.511	0.002	2.749	0.920
Gerontology	92	1.226	1.116	5.354b	2.531b
Growth	92	0.771	0.261	1.732	0.744
Hobbies	92	1.369	0.080	1.282	0.461
Homemaking	92	0.712	0.395	0.904	0.551
International Relations	92	0.602	3.085b	2.136	2.737b
Living with Stress	92	0.642	0.077	0.103	0.094
Maturation	92	2.275	0.160	0.600	0.281
Middle Age	92	1.260	4.842b	1.104	3.554b
Parent Education	89	1.700	1.671	0.524	1.226
Sexuality	89	1.714	0.343	5.358b	1.956
Teach Child Sex	89	0.530	0.452	3.764	1.722
Values	89	0.596	4.836b	1.226	3.522b
*Civic Responsibility	89	2.169	2.041	0.443	1.636
*Consumer Groups	89	0.110	9.263b	1.954	6.396b
*Family Breakdown	89	0.623	0.344	5.402b	1.899
*Marriage Preparation	89	0.764	1.488	1.627	1.352
*Sex Stereotype	89	1.625	1.344	0.714	1.095
*Sexual Therapy	89	1.286	1.181	1.741	1.532
*Emotions	90	1.552	0.342	0.004	0.231
*TV & Radio	90	0.204	1.186	0.944	1.047
*World Citizenship	90	2.516	1.883	0.180	1.276

TABLE 25.--Continued

Part 3: Content Topics; Non-Formal

Item	Total DF	F Interaction	F Main Effects Sections	F Main Effects Groups	F Main Effects
Care of Child	90	0.584	2.173	1.155	1.762
Censorship	90	0.097	1.614	0.067	1.110
Civic Responsibility	90	1.634	0.264	0.004	0.179
Communication Skills	90	0.052	0.112	1.108	0.490
Conflict Resolution	90	2.124	0.012	1.360	1.453
Contemporary Society	89	0.819	2.188	0.001	1.468
Coping	89	0.738	0.287	0.010	0.191
Death & Dying	89	5.359b	0.283	6.191b	2.193
Decision Making	89	2.181	1.416	2.333	1.774
Family Goals	89	0.209	1.343	3.199	1.884
Family Life Cycle	91	0.329	0.926	0.775	0.797
Family Planning	91	3.759b	1.144	4.690b	2.537
Gerontology	91	2.372	1.621	8.741b	3.927b
Growth	91	5.553b	0.107	2.561	0.991
Hobbies	91	0.332	0.131	0.018	0.099
Homemaking	90	1.195	1.024	0.318	0.766
International Relations	90	0.138	1.649	0.038	1.105
Living with Stress	90	0.076	0.229	0.342	0.298
Maturation	90	0.942	1.885	0.638	1.418
Middle Age	90	0.492	3.331b	0.002	2.228
Parent Education	89	0.016	0.180	0.178	0.162
Sexuality	89	0.037	0.060	2.279	0.840
Teach Child Sex	89	1.602	0.504	3.589	1.659
Values	89	0.871	3.875b	2.095	3.027b
*Civic Responsibility	89	0.282	3.658b	0.130	2.574
*Consumer Groups	88	1.377	0.133	0.029	0.098
*Family Breakdown	88	0.376	0.237	1.821	0.886
*Marriage Preparation	88	2.394	0.904	2.051	1.548
*Sex Stereotype	88	1.236	2.225	0.000	1.483
*Sexual Therapy	88	1.052	3.794b	0.064	2.534
*Emotions	90	2.024	0.281	0.059	0.198
*TV & Radio	90	0.204	1.186	0.944	1.047
*World Citizenship	90	0.724	0.867	0.008	0.578

TABLE 25.--Continued

Part 3: Content Topics; Informal

Item	Total DF	F Interaction	F Main Effects Sections	F Main Effects Groups	F Main Effects
Care of Child	88	0.891	2.274	0.961	1.789
Censorship	88	0.350	0.552	1.017	0.676
Civil Rights	88	0.563	1.430	0.008	0.958
Communication Skills	88	1.139	2.365	1.682	1.990
Conflict Resolution	88	0.227	1.599	0.076	1.067
Contemporary Society	90	2.515	0.919	1.800	1.072
Coping	90	0.285	0.192	0.192	0.172
Death & Dying	90	0.937	0.271	0.001	0.180
Decision Making	90	0.179	1.051	4.384b	2.341
Family Goals	90	0.821	0.009	0.017	0.011
Family Life Cycle	91	0.882	1.521	1.145	1.272
Family Planning	91	3.236b	0.025	1.188	0.418
Gerontology	91	1.110	0.320	2.946	1.178
Growth	91	3.833	1.215	0.631	0.976
Hobbies	91	1.196	2.339	0.267	1.756
Homemaking	91	0.775	0.246	4.289b	1.647
International Relations	91	0.996	1.483	0.034	1.005
Living with Stress	91	0.488	0.340	0.606	0.483
Maturation	91	0.504	0.698	2.487	1.327
Middle Age	91	0.425	2.645	0.184	1.868
Parent Education	88	0.291	0.661	0.527	0.580
Sexuality	88	0.694	0.127	0.411	0.233
Teach Child Sex	88	1.045	2.492	0.036	1.703
Values	88	0.567	0.289	0.002	0.195
*Civic Responsibility	88	0.382	0.924	1.411	1.219
*Consumer Groups	88	0.286	1.124	0.002	0.753
*Family Breakdown	88	1.611	0.087	0.004	0.058
*Marriage Preparation	88	0.133	0.320	0.007	0.213
*Sex Stereotype	88	0.781	0.416	0.556	0.442
*Sexual Therapy	88	1.606	0.836	0.050	0.608
*Emotions	89	0.221	0.117	0.086	0.113
*TV & Radio	89	1.772	1.021	0.387	0.857
*World Citizenship	89	2.114	1.816	0.358	1.412

Two-Way Analysis of Variance (SPSS)

Key: Groups 1. Specialist

2. Generalist

Sections 1. Specialist Hierarchical 4. Generalist Hierarchical

2. Specialist Heterogeneous 5. Generalist Heterogeneous

3. Specialist Homogeneous 6. Generalist Homogeneous

b=significant at 0.05 level

*Additional items supplied by panelists

TABLE 26.--One-Way Analysis of Variance of Item Scores Classified on the Basis of Groups and Sections of Panelists with Newman-Keuls Comparison among Ordered Means

Part 1: Objectives

Item	F _{obs.}	Prob.	Ordered Means
Health	0.439	0.822	241365
Operations	1.695	0.143	412635
Environment	2.387	<u>0.044</u>	<u>436125</u>
Change	1.215	0.309	614253
Consumer	1.011	0.417	536214
Creativity	0.434	0.825	416235
Care	1.151	0.340	142356
Children	2.485	<u>0.037</u>	<u>514236</u>
Interdisciplinary	1.489	0.201	564213
Social	0.894	0.490	523461
Apply Science	0.682	0.641	546231
Management	1.305	0.269	534216
General	2.027	0.082	325641
Resource	1.140	0.346	521346
Communicate	1.468	0.207	543126
Decision	0.370	0.868	546231
Science	0.564	0.730	642351
Physical	0.905	0.483	341526
*Disciplines	2.755	<u>0.022</u>	<u>534621</u>
*Courses	0.845	0.523	342165
*Apply Theory	0.718	0.614	543126
*Professions	2.521	<u>0.035</u>	432165
*Media	1.211	0.311	154326
*Intercultural	1.392	0.234	321456
*Legal	1.901	0.102	534126
*Values	2.707	<u>0.025</u>	<u>253614</u>
*Societal Structures	0.227	0.949	521346
*Innovation	0.265	0.930	453216
*Pre-school	0.367	0.870	241536

TABLE 26.--Continued

Part 2: Course Groupings

Item	F _{obs.}	Prob.	Ordered Means
Anthropology	0.717	0.614	254631
Biology	0.736	0.601	625341
Chemistry	0.069	0.995	564213
Child Development	2.882	0.019	541236
Clothing	1.402	0.231	542316
Communications	3.808	0.004	<u>541326</u>
Community	0.657	0.660	162354
Consumer Studies	0.658	0.658	134562
Design	2.653	0.028	542631
Economics	0.987	0.431	123456
English	0.158	0.975	645321
Environmental Ecology	0.383	0.860	514263
Family Development	0.590	0.710	254136
Family Management	0.410	0.840	541326
Family Finance	1.175	0.328	541326
Food	0.195	0.962	413526
Housing	1.735	0.134	423561
Law	0.559	0.733	215436
Medicine	0.783	0.567	143256
Non-traditional Family	1.502	0.197	542316
Nutrition	2.024	0.083	154362
Philosophy	1.211	0.311	524613
Physiology	0.459	0.807	462351
Physics	0.525	0.759	614325
Psychology	0.640	0.672	425316
Religion	0.853	0.518	312564
Retirement Preparation	0.843	0.525	512346
Social Work	0.672	0.648	514326
Sociology	1.189	0.321	561324
Societal Issues	0.394	0.853	421563
Statistics	0.990	0.429	345612
Textiles	1.447	0.215	435261
Women's Studies	0.916	0.476	324615
*Agriculture	0.389	0.856	453216
*Computer Science	2.919	0.018	<u>541362</u>
*Counselling	1.535	0.187	541632
*Food Management	0.399	0.849	631542
*Futuristics	0.430	0.828	563421
*Government Service	0.824	0.537	543216
*Human Development	0.164	0.973	254316
*International Relationships	1.500	0.197	524613

TABLE 26.--Continued

Part 3: Formal Content Topics

Item	F _{obs.}	Prob.	Ordered Means
Care of Child	1.532	0.187	416235
Censorship	0.317	0.901	562314
Civic Responsibility	2.777	0.022	521346
Communication Skills	4.414	0.001	543612
Conflict Resolution	1.178	0.326	653412
Contemporary Society	4.408	0.001	561234
Coping	1.261	0.288	561324
Death & Dying	1.201	0.315	542631
Decision Making	2.564	0.032	643512
Family Goals	0.744	0.595	561342
Family Life Cycle	0.246	0.939	423156
Family Planning	1.556	0.180	642153
Gerontology	2.009	0.084	542136
Growth	0.754	0.587	645123
Hobbies	0.824	0.538	315246
Homemaking	0.615	0.691	125634
International Relations	1.883	0.105	634152
Living with Stress	0.313	0.904	435126
Maturation	1.079	0.378	561234
Middle Age	2.636	0.029	251463
Parent Education	1.342	0.254	526134
Sexuality	1.680	0.147	564132
Teach Child Sex	1.272	0.283	463125
Values	2.508	0.036	634251
*Civic Responsibility	1.939	0.095	532164
*Consumer Groups	3.926	0.003	562341
*Family Breakdown	0.815	0.544	456321
*Marriage Preparation	0.439	0.822	532461
*Sex Stereotype	1.314	0.265	364215
*Sexual Therapy	1.112	0.360	463152
*Emotions	0.564	0.729	315462
*TV & Radio	0.710	0.620	563421
*World Citizenship	1.948	0.094	532614

TABLE 26.--Continued

Part 3: Non-Formal Content Topics

Item	F _{obs.}	Prob.	Ordered Means
Care of Child	1.135	0.348	524163
Censorship	0.703	0.625	251463
Civil Rights	0.654	0.662	512346
Communication Skills	0.315	0.903	465312
Conflict Resolution	1.003	0.422	513462
Contemporary Society	1.149	0.341	356124
Coping	0.376	0.864	512364
Death & Dying	2.993	0.015	543216
Decision Making	1.932	0.096	534612
Family Goals	1.271	0.284	542613
Family Life Cycle	0.609	0.695	652341
Family Planning	3.026	0.015	462153
Gerontology	3.305	0.009	542136
Growth	2.815	0.021	514362
Hobbies	0.192	0.963	243516
Homemaking	0.974	0.439	425316
International Relations	1.049	0.395	364125
Living with Stress	0.211	0.955	413562
Maturation	1.227	0.303	524136
Middle Age	1.245	0.295	514236
Parent Education	0.100	0.990	562341
Sexuality	0.526	0.758	456132
Teach Child Sex	1.672	0.149	453126
Values	2.175	0.064	653241
*Civic Responsibility	1.699	0.143	632514
*Consumer Groups	1.056	0.391	423165
*Family Breakdown	0.734	0.602	463512
*Marriage Preparation	1.602	0.167	435612
*Sex Stereotype	1.630	0.160	364215
*Sexual Therapy	1.824	0.116	463125
*Emotions	1.094	0.370	453126
*TV & Radio	0.710	0.620	563421
*World Citizenship	0.424	0.832	523164

TABLE 26.--Continued

Part 3: Informal Content Topics

Item	F _{obs.}	Prob.	Ordered Means
Care of Child	1.550	0.182	241356
Censorship	0.506	0.773	152346
Civic Responsibility	0.641	0.672	521346
Communication Skills	1.575	0.175	524136
Conflict Resolution	0.651	0.664	413625
Contemporary Society	1.348	0.251	536421
Coping	0.165	0.973	612345
Death & Dying	0.452	0.812	432615
Decision Making	1.607	0.166	456123
Family Goals	0.335	0.891	246315
Family Life Cycle	1.116	0.358	413265
Family Planning	1.545	0.184	261435
Gerontology	1.150	0.341	542316
Growth	2.119	0.070	642315
Hobbies	1.531	0.188	413526
Homemaking	1.298	0.272	213645
International Relations	1.001	0.423	542136
Living with Stress	0.485	0.789	541632
Maturation	0.997	0.425	213465
Middle Age	1.291	0.275	541236
Parent Education	0.458	0.808	245631
Sexuality	0.245	0.940	261435
Teach Child Sex	1.350	0.250	421536
Values	0.349	0.882	512346
*Civic Responsibility	0.851	0.519	321564
*Consumer Groups	0.548	0.741	245316
*Family Breakdown	0.633	0.677	543126
*Marriage Preparation	0.359	0.876	524136
*Sex Stereotype	0.735	0.601	463215
*Sexual Therapy	1.323	0.261	531462
*Emotions	0.266	0.930	351264
*TV & Radio	0.745	0.594	523146
*World Citizenship	2.076	0.075	<u>523164</u>

Low to high

Significant differences are underlined

- Key to sections
1. Specialist Hierarchical
 2. Specialist heterogeneous
 3. Specialist homogeneous
 4. Generalist hierarchical
 5. Generalist heterogeneous
 6. Generalist homogeneous

*Additional items supplied by panelists

TABLE 27.--Convergence to Consensus According to Uhl Formula

Part 1: Objectives

Item	Round 1	Round 2	Round 3
Health	17.248	8.515	5.296
Operations	27.456	20.861	16.699
Environment	15.295	12.838	6.150
Change	18.506	12.102	5.548
Consumer	16.241	13.159	4.530
Creativity	22.947	19.281	17.388
Care	19.726	8.185	5.529
Children	14.190	13.016	11.753
Interdisciplinary	21.688	19.307	8.809
Social	14.602	9.199	5.633
Apply Science	17.185	13.345	9.040
Management	16.072	12.684	9.229
General	31.616	21.343	17.763
Resource	26.706	20.936	13.007
Communicate	15.310	12.292	9.200
Decision	16.814	14.671	10.388
Science	20.868	19.709	16.000
Physical	15.096	5.825	5.813

Part 2: Course Groupings

Item	Round 1	Round 2	Round 3
Anthropology	25.577	18.993	9.639
Biology	24.584	19.888	16.443
Chemistry	26.067	11.959	13.781
Child Development	8.933	8.933	7.482
Clothing	24.124	20.753	16.725
Communications	9.730	9.364	6.360
Community	15.886	8.401	5.245
Consumer Studies	16.258	12.165	7.065
Design	23.127	17.731	12.719
Economics	15.882	8.960	4.887
English	29.806	24.319	17.175
Environmental Ecology	16.506	13.988	6.169
Family Development	9.505	8.199	7.286
Family Management	10.310	10.548	5.608
Family Finance	11.983	11.388	5.608
Food	20.216	16.658	7.000
Housing	15.701	7.651	5.777
Law	19.610	15.656	8.961
Medicine	23.000	22.956	11.567
Non-traditional Family	21.465	20.526	20.384

TABLE 27.--Continued

Part 2: Continued

Item	Round 1	Round 2	Round 3
Nutrition	18.121	12.934	11.036
Philosophy	25.040	12.632	9.796
Physiology	22.319	18.123	13.149
Physics	31.936	31.603	30.424
Psychology	17.045	8.826	5.463
Religion	29.147	17.329	11.602
Retirement Preparation	18.039	16.192	8.448
Social Work	24.455	18.986	14.407
Sociology	19.118	13.844	7.983
Societal Issues	18.419	9.091	6.850
Statistics	24.084	23.179	13.452
Textiles	26.200	18.427	12.397
Women's Studies	29.824	20.739	14.597

Part 3: Content Topics; Formal

Item	Round 1	Round 2	Round 3
Care of Child	19.159	12.175	6.276
Censorship	29.232	20.321	18.183
Civil Rights	22.096	13.587	7.800
Communication Skills	9.796	7.882	6.822
Conflict Resolution	18.153	10.161	4.249
Contemporary Society	14.451	11.902	5.208
Coping	21.971	11.762	5.262
Death & Dying	27.085	19.521	18.460
Decision Making	17.311	14.482	10.291
Family Goals	19.253	13.110	4.285
Family Life Cycle	16.628	7.174	5.771
Family Planning	21.113	11.579	4.530
Gerontology	17.346	11.954	4.530
Growth	18.237	11.966	6.371
Hobbies	30.596	18.632	15.007
Homemaking	26.905	22.400	19.067
International Relations	16.982	13.583	9.579
Living with Stress	17.348	12.175	3.941
Maturation	16.827	13.403	6.407
Middle Age	25.980	19.964	16.071
Parent Education	17.857	13.352	5.530
Sexuality	18.004	15.640	6.823
Teach Child Sex	18.333	11.174	8.053
Values	18.301	15.081	9.690

TABLE 27.--Continued

Part 3: Content Topics; Non-Formal

Item	Round 1	Round 2	Round 3
Care of Child	30.113	14.856	5.133
Censorship	18.059	15.679	15.945
Civic Responsibility	17.527	11.527	6.935
Communication Skills	17.670	13.755	10.239
Conflict Resolution	20.311	9.595	4.667
Contemporary Society	19.421	15.844	4.530
Coping	24.908	12.695	3.333
Death & Dying	18.096	18.386	14.121
Decision Making	28.048	10.221	3.825
Family Goals	31.888	22.215	15.783
Family Life Cycle	23.359	19.194	11.396
Family Planning	14.328	10.641	4.000
Gerontology	23.142	15.866	6.935
Growth	20.850	11.916	5.088
Hobbies	23.062	15.689	16.132
Homemaking	26.048	21.718	18.597
International Relations	16.666	13.487	7.576
Living with Stress	21.660	14.107	2.666
Maturation	25.313	18.745	12.339
Middle Age	24.998	17.194	13.091
Parent Education	18.398	10.759	4.463
Sexuality	19.428	15.648	6.854
Teach Child Sex	22.835	16.519	11.307
Values	20.074	14.794	7.511

Part 3: Content Topics; Informal

Item	Round 1	Round 2	Round 3
Care of Child	14.328	13.815	12.845
Censorship	29.789	19.585	11.326
Civil Rights	21.438	14.223	7.498
Communication Skills	12.990	12.621	10.047
Conflict Resolution	16.542	14.403	10.875
Contemporary Society	24.626	17.625	7.361
Coping	17.877	14.765	9.943
Death & Dying	17.799	11.261	3.941
Decision Making	14.742	14.286	12.617
Family Goals	13.557	15.819	12.920
Family Life Cycle	23.590	13.924	8.809
Family Planning	17.306	13.491	10.422
Gerontology	23.003	13.913	5.133

TABLE 27.--Continued

Part 3: Continued

Item	Round 1	Round 2	Round 3
Growth	13.446	14.162	7.701
Hobbies	17.704	7.667	2.667
Homemaking	15.942	15.364	9.740
International Relations	11.673	12.475	9.359
Living with Stress	17.377	13.948	8.251
Maturation	19.992	11.865	4.496
Middle Age	21.623	16.213	8.826
Parent Education	21.098	16.607	7.284
Sexuality	19.248	14.094	10.915
Teach Child Sex	15.079	13.559	12.190
Values	9.903	11.597	8.225

Uhl formula - Sum difference of each panelists score from the mean of all panelists, divided by mean of all.

TABLE 28.--Labels Used in Tables to Summarize Items

Part 1: Objectives

Item	Label
To identify and improve conditions contributing to man's health and physiological development.	Health
To have insight into business and marketing operations.	Operations
To identify and improve conditions contributing to man's immediate environment.	Environment
To comprehend social change.	Change
To focus on the family as a social unit and on family members as consumers of goods and services.	Consumer
To encourage the development of aesthetic appreciation and creative ability.	Creativity
To be responsible for supportive care of individuals at different stages in the family life cycle.	Care
To provide training to work with children and families to contribute to the individual becoming a fulfilled and productive member of society.	Children
To provide an interdisciplinary study of the historical, contemporary and emerging forms through formal coursework and interaction with individuals and families.	Interdisciplinary
To identify and improve conditions contributing to man's psychological and social development.	Social
To be able to apply, in a creative manner, the scientific method to problems of community living.	Apply Science
To help people in all strata of society in the management of their lives with respect to food, clothing, shelter, and human relationships.	Management

TABLE 28.--Continued

Part 1: Continued

Item	Label
To provide a general education.	General
To provide liason between consumers and producers of goods and services utilized by individuals and families.	Resource use
To communicate with skill with families at all levels of society.	Communicate
To focus on decision making and organizational processes related to development and use of family resources.	Decision
To provide a sound background in natural and social sciences.	Science
To know the physical and biological needs of family members in their various home settings whether actual or of the substitute institutional type.	Physical
*To be able to integrate scientific knowledge from the various disciplines which contribute to an understanding of family and individual life.	Disciplines
*To be able to integrate material within the curriculum from one course to another.	Courses
*To be able to translate scientific findings into policy for work with government and power groups and for programmatic statements to effect social change.	Apply Theory
*To act as a liason and resource person between the individual, the family, the community, and the various professions.	Professions
To provide training for presentation of materials for press, media, and other forms of communication.	Media
To comprehend and advance intercultural relations between individuals.	Intercultural

TABLE 28.--Continued

Part 1: Continued

Item	Label
To study the processes by which laws can be improved to better family life.	Legal
To emphasize moral values.	Values
To assist families to adjust to, contribute to, and obtain maximum benefits from existing structures.	Societal Structures
To influence innovation-decisions by securing adoption of new ideas or slowing the diffusion and adoption of ideas.	Innovation
To focus on the preschool child development in a modern society.	Pre-school

*Additional items supplied by panelists

BIBLIOGRAPHY

BIBLIOGRAPHY

- Agnew, Sister Marie. "Future Shapes of Adult Religious Education: A Delphi Study". Dissertation Abstracts 36A: 4372 (January 1976).
- Axelson, Leland J. "Promise or Illusion: The Future of Family Studies". Family Coordinator 24 (January 1975): 3-6.
- Babin, Patrick. "New Expectations". Curriculum Connections 3 (Summer 1976): 2-3.
- Baier, Kurt, and Rescher, Nicholas. Values and the Future. New York: Free Press 1969.
- Baird, Joan, and Keenan, Dorothy. Family Life Education Re-examined: Applications for Teachers. American Home Economics Association. 1971 Workshop.
- Bell, Daniel. "The Coming of the Post-Industrial Society". Educational Forum XL (May 1976): 575-579.
- Bernstein, G. A Fifteen Year Forecast of Information Processing Technology. Washington, D.C.: Naval Supply Systems Command, U.S. Government Printing Office, 1969.
- Bobbitt, Norma, and Paolucci, Beatrice. The Home as a Learning Center. East Lansing: Michigan State University. 1975. A Research Report.
- Brooks, Walter. "Nor Cal Research Group Vocational Education Study". Bethesda, Md.: ERIC Document Reproduction Service ED 069 276, 1972.
- Burks, Jayne Burress. "A Study of the Application of Delphi Technique to the Future of a Social Institution". Ph.D. Dissertation, Saint Louis University, 1973.
- Carey, Dennis Michael. "An Assessment of Future In-Service Training Needs of School Principals in a Massachusetts Delphi Study". Dissertation Abstracts 33A: 4712 (March 1973).
- Clark, S. C. T., and Coutts, H. T. "The Future of Teacher Education". Journal of Teacher Education. 22 (Winter 1971): 508-516.
- Clarke, Robert. Ellen Swallow: The Woman Who Founded Ecology. Chicago: Follett Publishing Company, 1973.

Clinch, Robert. "A Delphi Method for Establishing a Social Work Curriculum: An Exploratory Study". (Ph. D. Dissertation, Syracuse University) 1974.

Cromwell, Ronald, and Thomas, Vicky. "Developing Resources for Family Potential: A Family Action Model". Family Coordinator 25 (January 1976): 13-20.

Crowley, Judith Ann. "A Curriculum in Medical Technology Based on the Perception of Practitioners and Students: A Modification of Delphi Technique". Dissertation Abstracts 36A: 2972 (November 1975).

Curran, Mary Virginia. "Use of Delphi to Determine Priority of Needs for Changes in College Student Environment". Dissertation Abstracts 33A: 4870 (March 1973).

Cyphert, Frederick P., and Gant, Walter. "The Delphi Technique: A Case Study". Phi Delta Kappan LII (January 1971): 272-273.

Davis, Joseph Miro. "Land Use Forecasting: A Delphi Approach". Dissertation Abstracts 36A: 2972. (November 1975).

Davis, Robert H.; Alexander, Lawrence T.; and Yelon, Stephen L. Learning Systems Design. New York: McGraw Hill Book Company 1974.

de Jouvenal, Bertrand. The Art of Conjecture. New York: Basic Books, 1967.

Dieter, Lynn Phyllis. "Using Delphi Techniques in Setting Goals and Objectives for a Secondary School English Program". Dissertation Abstracts 35A: 3389 (December 1974).

Driskill, William David. "Priorities in Secondary School Physics Education, 1975-1985: A Delphi Study". Dissertation Abstracts 36A: 2120 (March - April 1975).

Enzer, Selwyn. "Delphi and Cross Impact Techniques". In Search For Alternative Futures, pp. 148-155. Edited by F. Tugwell, Cambridge, Massachusetts: Winthrop, 1973.

Etling, Arlen Wayne. "Characteristics of Non-Formal Educators: A Delphi Study of University of Massachusetts Ecuador Projects Facilitator Idea". Dissertation Abstracts 36A: 846 (August 1975).

Faherty, James Gregory III. "A Value Assessment of Long Term Future by Selected Groups in a School District Using Focus Delphi Technique". Dissertation Abstracts 36A: 1206 (March - April 1975).

Family Life Saskatchewan. Annual Report of the Fiscal Year Ending June 30, 1973.

Ferguson, George A. Statistical Analysis in Psychology and Education. 3rd ed. New York: McGraw Hill Book Company 1971.

Fogarty, James S. "The Tyler Rationale: Support and Criticism". Educational Technology XVI (March 1976): 28-32.

Fohlin, Mary B. "Selection and Training of Teachers for Life Education Programs". Family Coordinator 20 (July 1971): 231-241.

Frasier, Roberta C. "Meeting the Problems of Today's Families Through Extension Programs". Family Coordinator 20 (October 1971): 337-340.

Gazzola, Peter George. "Effect of Delphi Technique and Group Consensus in Educational Planning". Dissertation Abstracts 31A: 5072 (September - October 1971).

Glass, Gene V., and Stanley, Julian C. Statistical Methods in Education and Psychology. Englewood Cliffs: Prentice Hall Inc. 1970.

Goldberg, Ruth L., and Goldberg, Sidney. "The Role of the Learning Center on Family Functioning in Social Work Education". Family Coordinator 24 (July 1975): 293-295.

Gordon, Theodore J. The Future. New York: St. Martin's Press 1965.

Griffiths, Edwin Herschel. "The Applicability of Delphi Technique as a Method of Establishing Educational Goals". Dissertation Abstracts 34A: 2963 (May - June 1973).

Gunter, B. G., and Moore, Harvey A. "Youth, Leisure, and Post-Industrial Society: Implications for the Family". Family Coordinator 24 (April 1975): 199-207.

Guralink, David B. (ed.). Webster's New World Dictionary. New York: William Collins, 1974.

Haydon, Brownlee. The Year 2000. Santa Monica: Rand Corporation (1967) P-3571.

Helmer, Olaf. "An Agenda for Futures Research". Futures 7 (February 1975).

_____. Analysis of the Future: The Delphi Method. Santa Monica: Rand Corporation. (March 1967): 7-36.

_____. "New Developments in Early Forecasting of Public Problems: A New Intellectual Climate". Santa Monica: Rand Corporation (1967) P-3576.

_____. Social Technology. New York: Basic Books, 1966.

Helmer, Olaf, and Rescher, Nicholas. "On the Epistemology of the Exact Sciences". Management Science 6 (October 1959): 25-52.

Holt, James. "Involving the Users In School Planning". School Review 82 (August 1974).

Isaac, Stephen, and Michael, William. Handbook in Research and Evaluation. San Diego: Robert R. Knapp, 1971.

Johnston, D. F. "Social Indicators and Social Forecasting" In Imaging Alternative Future School Organizations, pp. 47-48. Edited by S. Popper. Minneapolis: University of Minnesota, 1972.

Jones, Homer William. "An Investigation of Effects of Feedback on Variability and Control Tendency of Group Opinion While Employing Delphi Technique". Dissertation Abstracts 34A: 2361 (May - June 1973).

Jones, Wayne Albert. "An Analysis of Special Education Needs Assessment Using Delphi Methods". Dissertation Abstracts 34A: 4039 (January 1975).

Kerckhoff, Richard K., and Hancock, Terry W. "The Family Life Educator of the Future". Family Coordinator 20 (October 1971): 315-324.

Laplane, Marilyn Joan. "Evaluation of a Selected List of Purposes for Physical Education Using a Modified Delphi Technique". Dissertation Abstracts 34A: 7027 (May 1974).

Lee, Jeanette. "The Future of Home Economics: A Delphi Study". Journal of Home Economics 65 (October 1973): 23-27.

Lillyquist, Michael Jerome. "Performance of Span and Delphi Methods in Human Dyads". Dissertation Abstracts 36A: 1510 (September 1975).

Linstone, Harold A., and Turoff, Murray (eds.). The Delphi Method: Techniques and Applications. Reading, Massachusetts: Addison-Wesley Publishing Company 1975.

Lipsitz, Alvin Herbert. "Delphi as an Intervention Technique in Developing a Plan of Change for a Student Affairs Office at Ohio State University". Dissertation Abstracts 33A: 4125 (July - August 1973).

McDaniel, Clyde O. "Toward a Professional Definition of Marriage Counselling". Family Coordinator 20 (January 1971): 30-37.

Malone, William, F. P. "A Study of Delphi Technique as an Instrument for Establishing Curriculum Revision Criterion in Dental Schools". Dissertation Abstracts 34A: 3032 (June - July 1973).

Maruyama, Magorah. "Cultural, Social and Psychological Considerations in the Planning of Public Works". Technological Forecasting and Social Change 5 (1973): 135-143.

_____. "Paradigm and Communication". Technological Forecasting and Social Change 6 (1974): 3-32.

_____. "The Second Cybernetics: Deviation Amplifying Mutual Causal Processes". American Scientist 51 (1963): 164-179.

Mathies, Lorraine. "Citings on the Educational Horizon". Educational Forum 54 (Fall 1975): 67-68.

Medgrave, Norman, and Ducanis, Alex. Educational Planning 3 (Winter 1973).

Mitroff, Ian, and Blankenship, Vaughen. "On the Methodology of the Holistic Experiment: An Approach to Conceptualization of Large Scale Social Experiments". Technological Forecasting and Social Change 4 (1973): 339-353.

Mitroff, Ian, and Turoff, Murray. "Technological Forecasting and Assessment: Science and/or Methodology?". Technological Forecasting and Social Change 5 (1973): 113-134.

Nash, Robert J., and Ducharme, Edward R. "A Futures Perspective on Preparing Educators for the Human Service Society". Teachers College Record 77 (May 1976): 441-472.

National Council on Family Relations. Committee on Educational Standards and Certification for Family Life Education. "Family Life and Sex Education: Proposed Criteria for Teacher Education". Family Coordinator 19 (April 1970): 183-186.

Novak, Michael. "The Family Out of Favor". Harpers 252 (April 1976): 37-46.

Novak, Paul. "Till Divorce Do Us Part". Macleans 89 (April 19, 1976): 26-31.

Oberto, Angelina. "Montana Home Economics Teacher Perceptions of Selected Societal Trends: Implication For Development of Family Life Curriculum". Ph.D. Dissertation. Michigan State University, 1973.

O'Connell, John Howard. "Delphi Assistance to Administration: Development and Testing of an Aid to Educational Decision-making". Dissertation Abstracts 36A: 649 (August 1975).

Page, Ellis B.; Jarjoura, David; and Konopka, Charles D. "Curriculum Design Through Operations Research". American Educational Research Journal. 13 (Winter 1976): 31-50.

Paris, Erna. "Marriage Reform". Chatelaine 49 (June, July) 1976: 39, 95-98; 33, 68-70.

Pryor, Charles Vernon. "Identification of Career Education Goals by Involving Selected Community Members Through the Use of Delphi Technique". Dissertation Abstracts 35A: 7659 (November - December 1975).

Raimon, Melwyn Lewis. "Identification and Hierarchical Classification of Competencies and Objectives of Student Teaching in Music Through a Partial Delphi Survey". (Ph. D. Dissertation, University of Connecticut) 1975.

Rainey, Mary C. "Non-Formal Education: Definitions and Distinctions". Interaction ECO VI (Winter 1976): 1-3.

Rickman, Linda Wickin. "Consensus Formation on Educational Changes Using Modified Delphi Technique". Dissertation Abstracts 35A: 4094 (January 1975).

Rosich, John Michael. "Assignment of Group Value Judgements of Educational Outputs Using Delphi Procedures". Dissertation Abstracts 35A: 7691 (November - December 1975).

Rowse, Glenwood, L.; Howse, Nancy J.; and Gustafson, David H. "Role Based Curriculum Development in Higher Education". Educational Technology XV (July 1975): 13-23.

Rumble, Frank Eakes. "A Comparison of Likert and Q Sort Rating Scales in Delphi Technique". Dissertation Abstracts 36A: 653 (January - February 1975).

Saskatchewan. Department of Continuing Education. Annual Report for the Fiscal Year Ended 30 June 1975.

Saskatchewan. Department of Education. Report on the Minister's Advisory Committee on Family Life Education, 1974.

Saskatchewan. Department of Health. Report of the Family Planning Advisory Committee to the Committee of Ministers on Family Planning. April 1975.

Saskatchewan. Legislature. Statutes. An Act Respecting the Universities Commission, 1974. May, Ch. 18 (sec. 2b).

_____. Statutes. An Act to Amend the School Act, 1964. March, Ch. 19.

Saskatoon. Citizen's School Inquiry Committee. Report. 1973.

Schvaneveldt, Jay. "Role Problems of the College Family Life Educator and Researcher". Family Coordinator 20 (January 1971): 3-10.

Short, Edmund. "Knowledge Production and Utilization in Curriculum: A Special Case of the General Phenomenon". Review of Educational Research 43 (Summer 1973): 237-303.

Silverman, Robert J. "The Education Editor as Futurist". Teachers College Record 77 (May 1976): 473-494.

Skyline Wide Educational Plan (SWEP) Planning Project. Bethesda, Md.: ERIC Document Reproduction Service, ED 109 759, 1974.

Small, James. "Senate Report on the Future of the Extension Function: A Reaction". New Trial 30 (April 1975): 3-4.

Snell, Claude Richard. "Community Based Goals of Education by Use of Delphi Technique". Dissertation Abstracts 35A: 2612 (November 1974).

Stewart, Arthur Van. "A Delphi Analysis of Intramural Practice Programs in American Dental Schools". Dissertation Abstracts 34A: 6420 (September - October 1974).

Sweigert, Ray, and William Schabaker. "Delphi Technique: How Well Does it Work in Setting Educational Goals?". Bethesda, Md.: ERIC Document Reproduction Service. ED 091 415, 1974.

Tarsis, Joshua. "Dimensions of Future Roles of Denominational Elementary School Principals: A Delphi Study". Dissertation Abstracts 35A: 2615 (November 1974).

Teller, Richard Raymond. "Forecasting the Role of Superintendents by Delphi Method". Dissertation Abstracts 35A: 2554 (November 1974).

"The Family Troubled by Changing Moves, Still Likely to Thrive. Wall Street Journal 18 (March 1976): 1.

"The Open University System". Education (May 21, 1976): 1-VII.

Transition 6 (March/April; June/July 1976).

Tyler, Ralph. "Reconstructing the Total Educational Environment". Phi Delta Kappan 57 (September 1975): 12-13.

Uhl, Norman. "Encouraging Consensus of Opinion Through Use of Delphi Technique in Process of Identifying Institutional Goals". Bethesda, Md.: ERIC Document Reproduction Service. ED 048 713, 1970.

University of Saskatchewan. A Report on the Role of the College of Home Economics at the University of Saskatchewan. (1975).

Van de Ven, Andrew Henry. "An Applied Experimental Test of Normal, Delphi and Interacting Decision Making Processes". Dissertation Abstracts 33A: 3094 (July - August 1972).

Waldron, James Shear. "An Investigation into Relationships Among Conceptual Level, Time Delay of Information Feedback, and Performance in the Delphi Process". Dissertation Abstracts 31A: 5862 (May 1971).

Weatherman, R., and Swenson, K. "Delphi Techniques". In Futurism In Education, pp. 97-114. Edited by Stephen Hensley, James R. Yates. Berkeley: McCutchan Publishing Corporation. 1974.

Weaver, W. Timothy. "The Delphi Forecasting Method". Phi Delta Kappan LIII (January 1971): 267-271.

Weisberg, Kelly D. "Alternative Family Structure and the Law". Family Coordinator 24 (October 1975): 549-559.

Welty, G. "Some Problems in Selecting Delphi Experts for Educational Planning and Forecasting Exercises". California Journal of Education Research 24 (1973): 129-134.

Womble, Dale L. "Reactions From Delphi Study". Journal of Home Economics 66 (January 1974) 2.

Yoda, Koji. "An Application of Computer-Aided Delphi and Cost/Effectiveness Concepts to University Personnel Administration". Dissertation Abstracts 34A: 4809 (July - August 1974).

Yule, Jamie B. "Expanding Our Concept of Home Economics Education". Journal of Home Economics 67 (May 1975): 23-25.

GENERAL REFERENCES

General References

- Dissertation Abstracts. 1969-1976.
- Educational Technology. 1972-1976.
- ERIC Document Service. 1970-1976.
- Family Coordinator. 1970-1976.
- Futures. 1972-1976.
- Journal of Home Economics. 1970-1976.
- Journal of Marriage and Family. 1971-1976.
- Technological Forecasting and Social Change. 1970-1976.
- The Futurist. 1967-1976.
- Turabian, Kate L. A Manual for Writers. 4th ed. Chicago: The University of Chicago Press. 1973.

University Calendars, Bulletins, and Reports

- Acadia University. Calendar. 1975-1976.
- Brescia College, University of Western Ontario. Calendar. 1975-1976.
- North Dakota State University. Bulletin. 1974-1976.
- Programme Committee on Household Science. "Report to the Provost of the University of Toronto". November 1, 1974.
- University of Alberta. Calendar. 1975-1976.
- University of Guelph. Calendar. 1975-1976.
- University of Guelph, MacDonald Institute and School of Hotel and Food Administration. Academic Brief. 1968.
- University of Manitoba. Calendar. 1975-1976.
- University of North Dakota. "Home Economics Departmental Goals". 1973-1974.
- University of Saskatchewan, Saskatoon. Calendar. 1975-1976.

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